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**FINAL  
ENVIRONMENTAL  
ASSESSMENT  
  
FOR THE  
ISSUANCE OF  
  
SNOWCREST SPECIAL  
LEASES**



Environmental Assessment Prepared by  
Department of Natural Resources and Conservation  
Trust Lands Management Division  
June 1999

Primary Author  
Dave Mousel



# SNOWCREST SPECIAL LEASE ENVIRONMENTAL ASSESSMENT

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# ENVIRONMENTAL ASSESSMENT

**Project Name:** Snowcrest Special Lease Issuance

**Proposed Implementation Date:** Spring-1999

**Proponents:** The Dept. of Natural Resources and Conservation, Trust Land Management Division;  
The Ledford Creek Grazing Association;  
Terry Todd and Dan Allhands; and  
Turner Enterprises, Incorporated

## 1.0 INTRODUCTION

### *1.1 Introduction and Background*

In June of 1996, the State acquired approximately 12,180 acres of land, commonly referred to as the Snowcrest property from Turner Enterprises, Incorporated (TEI) via a land exchange (for details see Turner Exchange Environmental Assessment). These lands are held in trust by the State to generate revenue for the associated School Trusts (Common School Grant, the School of Mines, Montana State University 1st and 2nd Grants, and the School for the Deaf and Blind). The Trust Lands Management Division (TLMD) of the Department of Natural Resources and Conservation administers leasing and licensing of activities on these lands.

Following the closing on the property, in Virginia City on June 23, 1997, the TLMD temporarily licensed grazing privileges on the Snowcrest parcels back to TEI for the balance of the 1997 grazing year and for 1998. That license expired on February 28, 1999. The purpose for issuing a short-term license instead of leases at that time was to provide sufficient time for the TLMD to develop a management strategy for the affected lands and for resolution of the litigation over the land exchange.

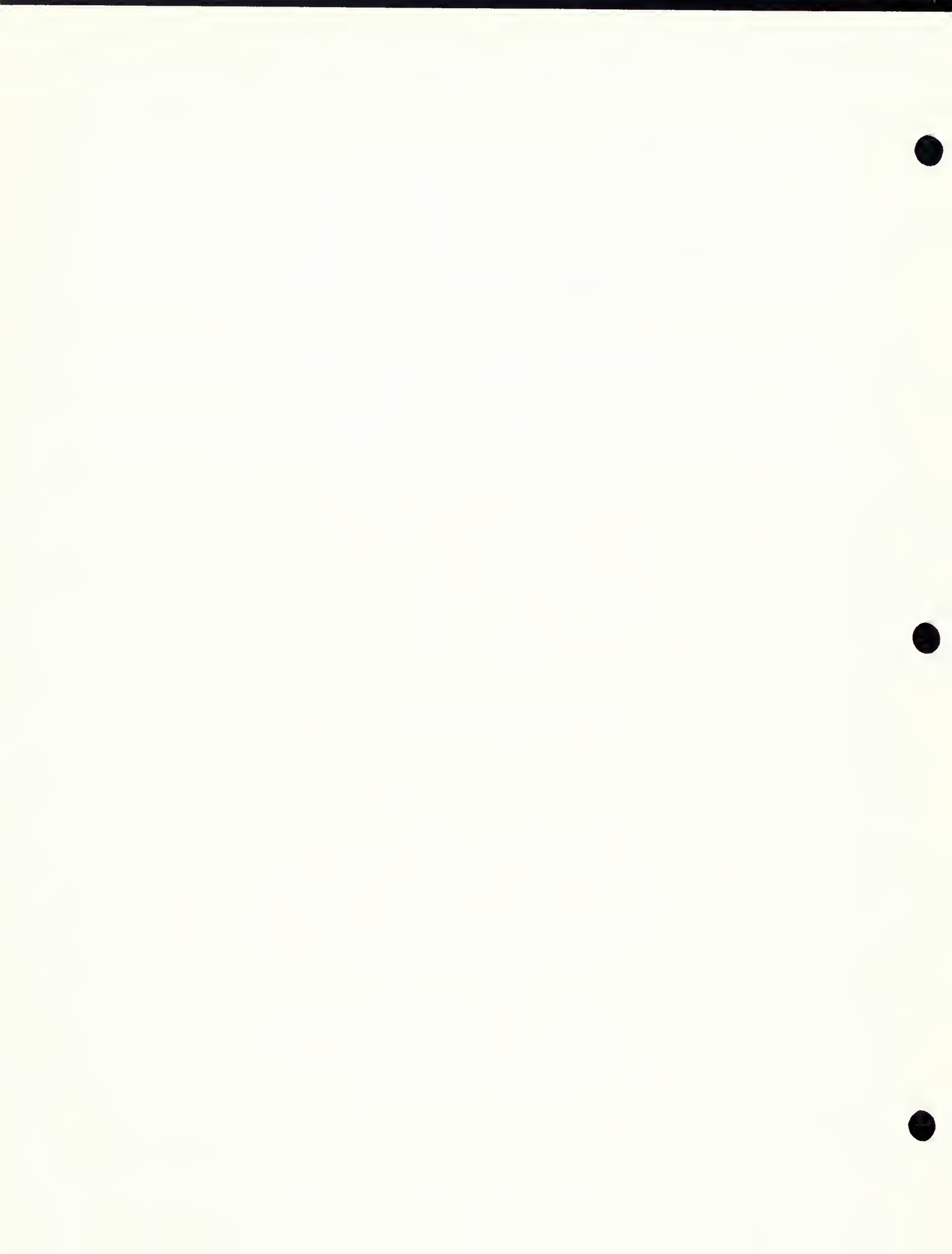


## **1.2 Need for a Decision**

Because of the fiduciary responsibilities of TLMD to the trusts, the TLMD is considering issuance of five new Special Leases to four entities based on the results of a recently completed competitive bidding process. Based on the arrangement of the properties and existing fence locations, TLMD divided the Snowcrest properties into five distinct units as shown on the attached map, labeled EXHIBIT 1 (See Page 28). Following delineation of the units, the TLMD advertised and solicited bids for special leases, offering prospective lessees a distinct package of rights for each. The actual package of rights does vary by unit, but may include the following: authorization to graze livestock (included on all units), authorization to control outfitting, and a restriction on the development of cabin sites (included on all units). Restricting timber harvest was also offered for bid in the package for Unit 3, but the successful bidder did not bid on that component.

The purpose of this MEPA (Montana Environmental Policy Act) document is to evaluate and consider potential environmental and socioeconomic effects of issuing these new leases and allowing placement of necessary and specified improvements for the grazing use proposed by the successful bidders, and develop mitigation measures to overcome concerns brought out in the review process.

Any improvements not specified or proposed at this time and considered in this document will be evaluated by TLMD consistent with MEPA requirements when placement approval is requested by the respective lessee(s).



## **2.0 THE AFFECTED ENVIRONMENT**

### **2.1 Location and Description of Properties**

In general, the affected lands are located in Madison County approximately 20 miles south of Alder, Montana on the Cream Creek, Ledford Creek, and Robb Creek drainages (see map). More specifically, the affected lands include portions or all of the following tracts. Sections 4, 9, 10, 15, 16, 17, 22, 26, 27, 28, 34, and 35 of Township 9 South, Range 4 West; Sections 3, 4, 5, 7, 8, 9, 18, 19, 30, and 31 of Township 10 South, Range 4 West; and Sections 11, 13, 14, 23, 24, 25, and 26 of Township 10 South, Range 5 West. A more detailed list of the parcels broken down by unit is found in TABLE 1 (Page 29).

### **2.2 Climate**

The climate that prevails in this area of southwest Montana is semiarid and continental. Winters are typically cold and summers relatively cool; though temperatures do vary considerably due to elevation and aspect. Annual precipitation for the property averages about 13 inches, with most of that in a normal year coming in the form of rainfall during the spring and summer. The winter months typically contribute the least amount of total precipitation in the area.

### **2.3 Topography and Aesthetics**

The subject property is typical of many areas of southwestern Montana, with the open grassy ridges and relatively narrow valley-bottoms with streamside willow communities and a mountain backdrop. Here, the Snowcrest mountain range presents a majestic background. On a clear day and from up on the ridges the casual viewer can see the countryside extending for miles to the north and west. Elevations of the subject properties range from approximately 5,740 feet elevation in lower Ledford Creek to mountain ridges extending to an elevation of about 8,040 feet in the uppermost areas. The predominant elevations on the properties lie in the lower to middle of this range.

### **2.4 Geology**

The geology of the area encompassing the subject properties is comprised of mixed tertiary sediments formed from stream and alluvial fan deposits. Generally, the streams are deeply incised with narrow flood plains. Some areas of natural landslides occur in the uplands west of Cream Creek and in the upland areas of the ridges along Robb Creek and its tributaries.

### **2.5 Soils**

The soils along the stream bottoms of Ledford, Cream and Spring Creeks are comprised of the Trudeau series. These soils consist of deep, well-drained loams formed in alluvium derived from fans, foot slopes and terraces of sedimentary uplands. These soils are moderately to strongly alkaline. Some areas along Ledford Creek have been irrigated for hay and forage production, which has improved the soil quality through desalinization on the affected sites, but it has also resulted in soil erosion where ditches were constructed on steep grades.

The upland soils on the bench areas along lower Ledford Creek and to the east are comprised of the Musselshell, Trimad, and Amesha series (Madison County Soil Survey, USDA Soil Conservation Service). These soils occur on steep to nearly level slopes, and they are generally deep, well drained loams on fans and terraces. The upland soils in the area of the upper reach of Ledford Creek and the area situated along Robb Creek are comprised of the Bridger and Hanson series. These soils are situated on steep to gently sloped terrain of the mountain slopes and glacial moraines.



## **2.6 Hydrology, Riparian and Water Resources**

The climate in southwest Montana and particularly in the area of the subject properties, is arid and typically produces relatively little runoff. Many of the streams are ephemeral and intermittent, but perennial streams do also exist. The stream channels of all classes have typically been impacted by relatively heavy and prolonged past grazing use. The few springs that do occur in the area are generally located along the mountain front. The few water sources occur on the benches between the stream drainages.

Two separate reaches of Ledford Creek are contained on the properties. The lower reach, within Unit 1, is approximately 3 miles long. It can be described as a reach with a mixture of relatively open areas with little willow cover, and areas with moderate stands and good cover and shading. A few beaver dams are also evident along this segment of the stream.

The upper reach of Ledford Creek at slightly more than 2 miles in length has a significantly higher willow cover overall than does the lower reach. This segment also contains many more beaver dams than does the lower one. Most of the dams in this reach are not actively maintained, though there is some current beaver activity.

There is significant erosion associated with the irrigation systems in Units 1 and 4. This erosion contributes some seasonal sedimentation to the waters of Ledford Creek. Erosion and sedimentation levels are expected to diminish in time as bare areas revegetate and banks stabilize. Under the Lease on Unit 1, some acreage would continue to be irrigated, but some maintenance of ditches will be required.

Unit 2 contains a short reach of Spring Creek, which also extends for about two miles through Unit 3. This stream has a narrow floodplain, and also a relatively narrow band of willows along most of its length. Though the stream corridor does show some impacts from past grazing activity, through most of the reach the banks of this stream are relatively stable.

Cream Creek courses through the east side of Unit 3 for a distance of slightly more than two miles. Due to the local topography, this stream is rather confined through most of the reach and is mostly armored against degradation. Some impacts from soil compaction and hoof action from past cattle grazing activities are obvious in the lower end of the reach where the valley begins to open up.

Unit 5 contains about 7 or so miles of perennial and intermittent stream corridors. Of that distance Robb Creek represents about one third of the distance, coursing a distance of a little more than two miles through the unit. Several unnamed and mostly intermittent tributaries make up the balance. Though these streams are relatively incised with narrow floodplains, some damage to from past livestock use is evident, but it is limited, due to the constricted area in the narrow valleys. Overall the riparian zones in Unit 5 are in relatively good health.

## **2.7 Vegetation**

With the exception of some bottomland acreage of Unit 1 that is improved pasture of introduced forage plant species, the vegetative communities present on the properties consist primarily of native flora. There are however, inclusions of some introduced invader species. For details on specific plants or communities please refer to a copy of the Turner Exchange EA, Botanical Report.

The species comprising the existing communities evolved under a regime where herbivory by ungulates was prevalent. Additionally, the subject properties have a history of grazing by domestic livestock. Introduction of domestic cattle, horses, and sheep into the general area took place in the mid-to-late 1800's, and grazing by animals of one or more of these classes has been ongoing since that time. Each of these domestic animal classes has different grazing habits and preferences, and corresponding shifts in the composition of the plant communities may have occurred as each class grazed the range.





Most recently, following TEI's acquisition of the subject properties in 1993, and continuing through the 1998 season, bison have been the primary herbivore grazing the subject properties. Grazing by cattle has also taken place during this period, but only on a limited basis. It is likely that the bison grazing that took place during the past few years on the properties has had little impact on the overall state of the vegetative complex, though some effects in localized situations are likely.

A host of factors have some degree of influence over the plant community that currently occupies a specific site. The plant community existing on a particular site is an expression of a dynamic and very complex and interactive system. In part, the list of factors affecting the community includes the timing, frequency, and intensity of grazing; the duration of rest periods between grazing events; soil texture, depth and temperature; physical and chemical characteristics of the soil; amount and type of plant residues on the soil surface; nutrient availability; soil moisture conditions; the timing, intensity, and form of precipitation; the length of day, and ambient air temperatures, the composition of the plant community and the presence of non-native plants or aggressive and invasive type plants; the relative vigor and productivity of the plants in the community; the type and number of herbivores that grazed the site in the recent past and over time; the slope and aspect of the site; the juxtaposition of the site in relation to other sites and the make-up of the other sites with which the subject site is associated; the position of the site on the landscape; and the availability and distance to water. Altering or changing any one or a combination of these factors may result in a shift in the community that is being expressed.

### 2.7.1 Sensitive and Rare Plants

Populations of three relatively rare plant species were recorded as being present within the area of the subject properties during the botanical review conducted for the exchange EA. The first species, "Bruneau's mariposa lily (*Calochortus bruneauensis*), occurs as scattered populations of hundreds of individuals in the limber pine-Douglas fir savannah" and in "the native perennial grasslands and shrublands" of the Cream Creek area in Unit 3 (Turner Exchange EA, Botanical Report, 1994). Park milkvetch (*Astragalus leptalea*) and weak butterweed (*Senecio debilis*) populations were noted as being present in Unit 1, in association with Ledford Creek. There, Park milkvetch occurs as scattered patches "on drier meadow margins" that contain "at least one thousand" individual plants. Weak butterweed "occurs on a single moist site along the creek containing a population of fewer than one hundred individuals." More specific details regarding the identification and location of these species are presented within the exchange EA.

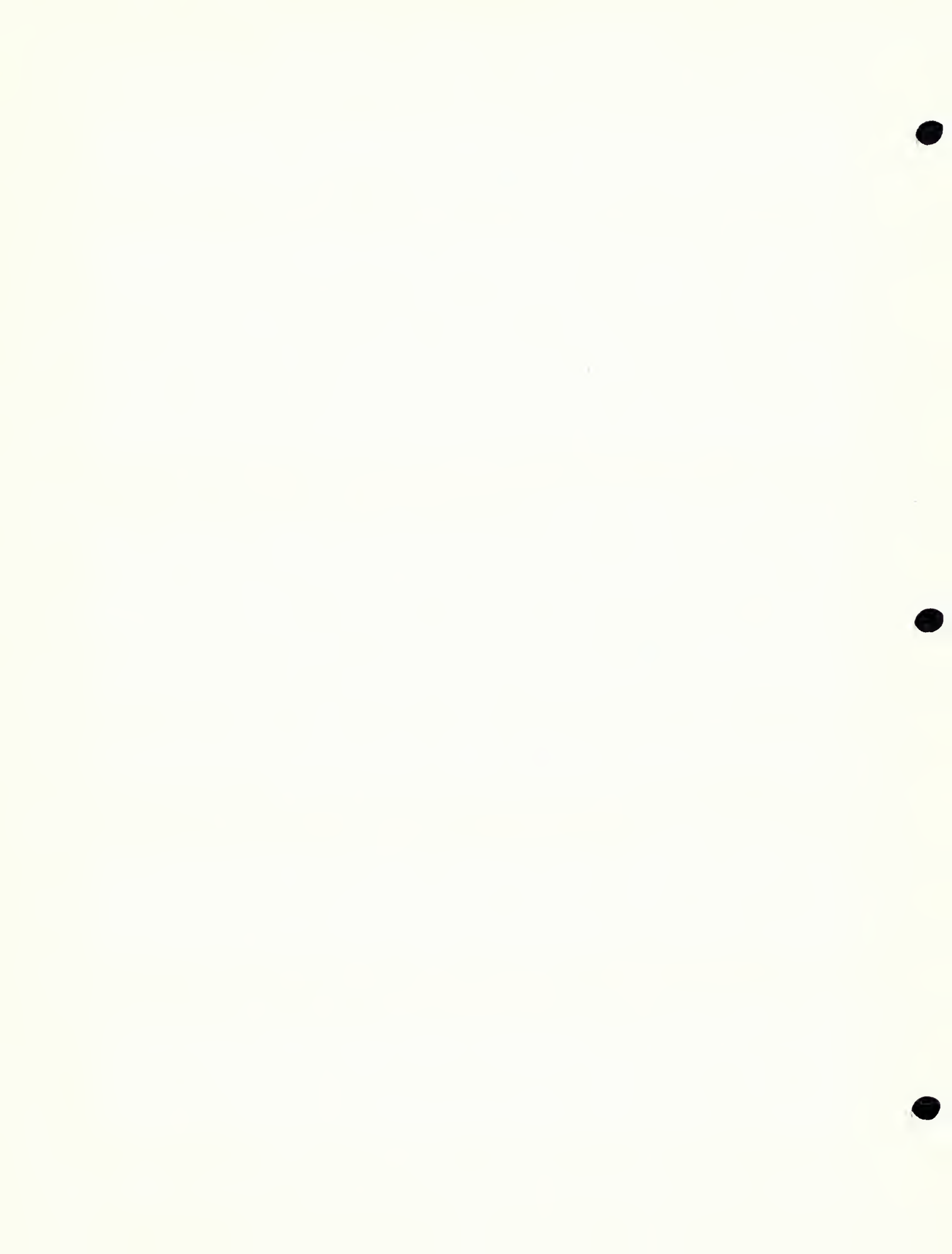
The Snowcrest property also contains areas that are suitable habitat for a number of other sensitive, rare, or Threatened and Endangered plant species (T&E species). No other T&E plant species were observed on the properties while the botanical survey was being conducted for the Exchange EA.

### 2.7.2 Noxious Weeds

Populations of spotted knapweed (*Centaurea maculosa*) and Canada thistle (*Cirsium arvense*) occur on the subject properties. Both species are classified as Category 1 Noxious Weeds in the State of Montana, meaning that state law requires that they be controlled. Additionally, populations of houndstongue (*Cynoglossum officinale*) and field scabious (*Knautia arvensis*) also occur. While these latter two species are not categorized by the State as being noxious, they are classified as Noxious Weeds by the Madison County Weed Board.

#### 2.7.2.1 Weed Control

Control of the four named species and any other plants classified as being noxious by either the State or the County and that may occur on the premises during the term of the leases, would be exercised. Control would be the responsibility of the individual lessees, and would consist of a combination of one or more of the following practices: chemical application, mechanical, or biological treatments. Only approved biological control agents may be used, and all treatments with chemical herbicides on the affected properties would be in accordance with label directions and in compliance with federal and State regulations.



## **2.8 Wildlife**

### **2.8.1 Terrestrial Wildlife**

Many different wildlife species inhabit the general area of the subject properties. Included in the list would be elk, moose, mule deer, antelope, whitetail deer, and mountain goat. These big game species are known to make use of various portions of one or more of the units at various levels during different times of the year. Some species or individual animals are more or less resident year round, while others are transient or nomadic, or may habituate the subject areas only seasonally.

### **2.8.2 Threatened and Endangered Animal Species**

In the Exchange EA it was noted that "there are no documented occurrences of threatened or endangered species on the trade parcels." However, the area does provide habitat suitable for several sensitive species, including peregrine falcons, and ferruginous hawks (Department of Fish Wildlife and Parks (DFWP), Robb/Ledford Wildlife Management Area (WMA) - Draft Management Plan).

### **2.8.3 Aquatic Wildlife and Fisheries**

Both Ledford Creek and Robb Creek are known to contain game fish populations, though the quality of the fishing on the stream reaches of the subject properties has not been specifically documented. Ledford Creek, including reaches on the subject properties, is known to contain fishable populations of rainbow trout, rainbow-cutthroat hybrids, and brown trout. Inventory work completed in 1991 put total fish populations for Ledford Creek at approximately 240 fish per mile. Brown trout were the predominant species in the population at the time of the survey, comprising approximately 74 percent of the fish over 6 inches in length. Similarly, a survey conducted on Robb Creek in 1991 showed that brook trout dominate the fishable population of nearly 500 catchable fish per mile of stream. However, a small population of Westslope Cutthroat trout (WCT) was also present, comprising about 6 percent of the population (DFWP, Robb/Ledford WMA - Draft Management Plan).

### **2.8.4 Threatened and Endangered Fish Species**

The WCT is a species currently being considered for listing as threatened throughout its entire range by the US Fish and Wildlife Service. Special consideration should therefore be given to activities that may further jeopardize the integrity of the habitat of the streams that have WCT populations. A statewide inter-agency Conservation Agreement and Management Plan for WCT is currently being developed. It is currently in draft form. The DNRC is a cooperator in development of the plan. Management actions under that plan are to be based in part on the genetic purity of the affected population.

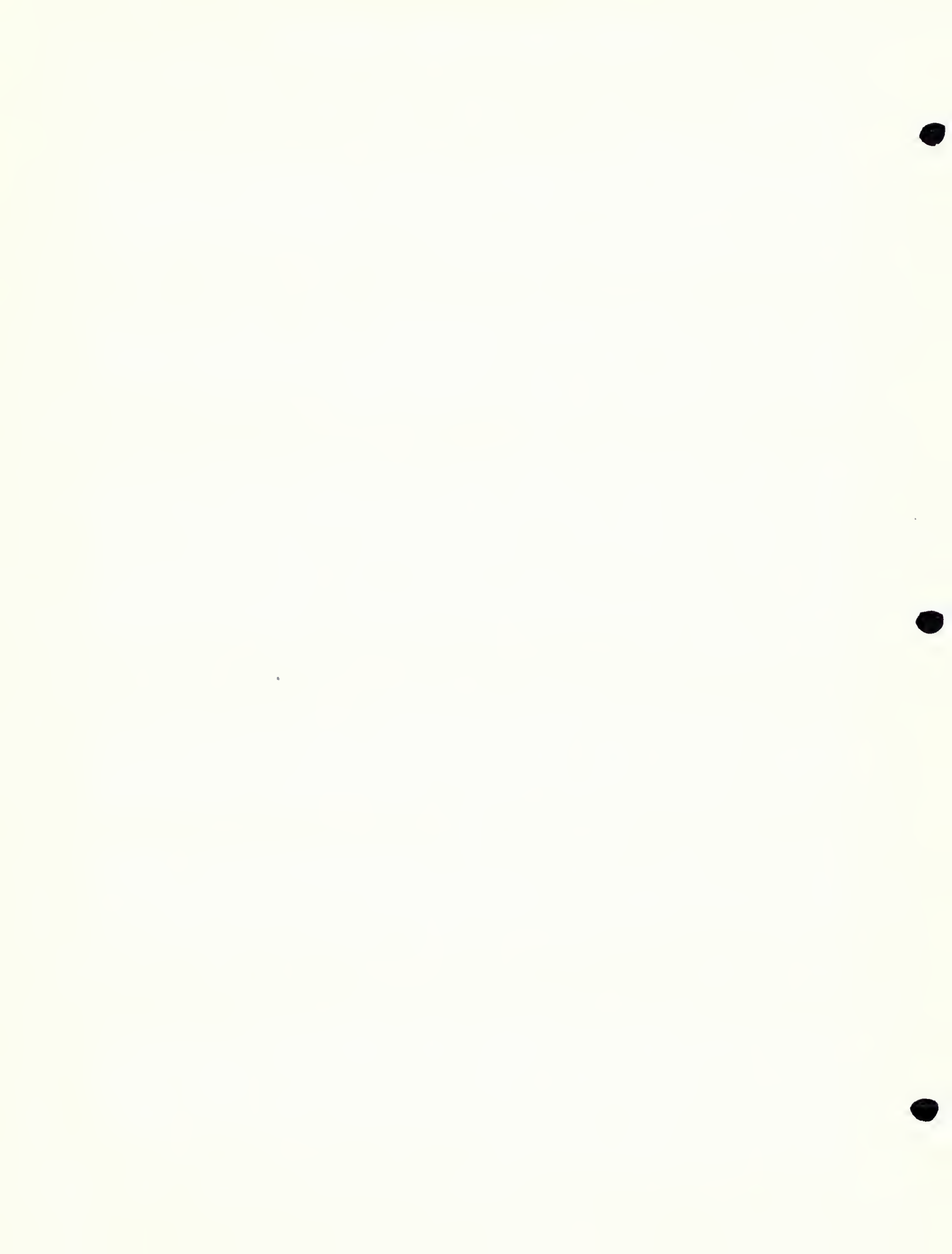
WCT typically hybridizes with rainbow trout when populations of both share the same waters. The genetic purity of the WCT population in Robb Creek appears to be somewhat hybridized as indicated by results of electrophoresis tests conducted by or for DFWP. Those tests show the Robb Creek WCT population to be approximately 95.5 to nearly 99 percent pure (DFWP, Robb/Ledford WMA - Draft Management Plan).

With respect to WCT, the status of Cream Creek, Spring Creek, and other tributaries to Ledford Creek and Robb Creek are unknown.

## **2.9 Recreation and Access to Other State and Federal Lands**

The diverse habitat and topography of the subject property provides opportunity for an abundance of individual or outfitted recreational activities, including hunting, hiking, site-seeing, cross-country skiing, and a host of other uses to persons who possess State Land Recreational Use Licenses. In addition, those with rod and reel may utilize portions of Ledford and Robb Creek as they meander through Units 1, 4, and 5. However, recreational pursuits or access involving use of motorized vehicles would be restricted to roads/routes designated and posted open for such use.

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The property also provides access to other state lands and federal lands located in the area. Though other access routes do exist, that access is enhanced with the addition of the subject properties. The eastern boundary of Units 3 and 4 border the Beaverhead National Forest, while the western boundaries lie adjacent to and within portions of DFWP's Robb-Ledford Wildlife Management Area.

### ***2.10 Water Rights***

Water for irrigation is generally a limited commodity in Montana and as a result, existing water rights can have considerable value. As noted previously within this assessment, both Unit 1 and Unit 4 contain acreage that has been historically irrigated. The State acquired the water rights associated with this acreage in the land exchange. Failure to irrigate regularly puts the water rights, which are considered an asset of the Trust, at risk of abandonment.

To preserve and protect the water rights acquired in the land exchange, under all the action alternatives, the TLMD, would require that the previously irrigated lands of Unit 1 be irrigated on a regular basis and using the existing facilities. Further development of the irrigation system may be allowed on this unit, subject to review and approval of TLMD and per MEPA review procedures.

### ***2.11 Cultural and Paleontologic Resources***

No known cultural resource inventories have been conducted on the subject properties, though some cultural sites have been identified and are known to occur. Casually observed sites on the properties include locales containing chipped stone tool debitage, and remnants of log cabins and other associated structures.



### **3.0 PROPOSED ACTION AND ALTERNATIVES**

This chapter describes the proposed action and the various alternatives considered. Though listed, the No Action Alternative is not considered by the TLMD to be a viable option, because of the fiduciary responsibilities it has to the beneficiaries of the trusts associated with the properties.

#### ***3.1 The Proposed Action – Twenty-Year Special Leases***

The alternative preferred by the TLMD is the packaging of several rights under special lease on the acquired properties. Under this alternative five special leases would be issued to the successful bidders for a duration of 20 years, ending February 28, 2019. At that time the TLMD would reevaluate its options on the property.

This alternative provides a means by which the license term can be extended beyond the ten-year term of the traditional grazing lease, effectively capturing competitive bid rentals for a prolonged period. It also provides a means of generating revenues from the temporary exclusion of cabinsite development on the properties.

The base rentals under this alternative would be fixed for the duration of the lease term on all Leases. However, additional rentals may be negotiated with the Lessees (or Sublessees) on Unit 1, and possibly also Unit 4. These two units contain irrigable land that if redeveloped or developed to potential can effectively result in forage availability well above the AUMs currently set by the TLMD. Under the terms of the lease agreement the Lessee (or Sublessee) would be required to contact the TLMD for approval to exceed the established AUMs, at which time reasonable compensation to the associated Trust for the value of the additional AUMs would be negotiated.

#### **3.1.1 Description of the Units**

The following section provides a description of each of the five defined units, and provides some detail about how the individual units would be used.

##### **3.1.1.1 Unit 1**

Unit 1 is situated along Ledford Creek immediately west of the Ledford Creek road (a county road). The unit, which consists primarily of bottomlands and contains approximately 751 acres, has a rated carrying capacity of 360 Animal Unit Months (AUMs) as determined through range evaluations completed by TLMD staff in August of 1996. Currently, this unit is fenced in common with other state leased and deeded land controlled by TEI. A portion of the acreage in the unit has historically been irrigated for haying and/or increased forage production.

Based on the bidding results, the lease on Unit 1 would be issued to the Ledford Creek Grazing Association. It would include authorization to graze livestock to a level not to exceed the carrying capacity established by TLMD, control outfitting, and a restriction on cabinsite development on the lands contained in the unit. Based on correspondence received from the LCGA, in exchange for the authorization of LCGA members to graze cattle on other lands controlled by TEI, the right to graze livestock on the unit would be sublet to TEI. Under this sublease, TEI proposes to graze bison of mixed ages in conjunction with their other state leased and deeded grounds. No improvements would be necessary or are requested to facilitate this proposed use.

Because of the location of existing fences in relation to this unit and the adjoining lands, water for livestock grazing the unit is available from Ledford Creek and Robb Creek to the west.

##### **3.1.1.2 Unit 2**

Unit 2 contains approximately 2,149 acres of rolling upland and is situated to the east of the Ledford Creek Road. This unit has a rated carrying capacity of 417 AUMs. Similar to Unit 1, this unit also has adjacent state leased and deeded land controlled by TEI fenced commonly with it. The east side of this unit adjoins privately held lands of another operator.

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Based on the bidding results, the Lease on Unit 2 would package the right to graze livestock at a level not to exceed the carrying capacity established by TLMD, and control outfitting on the land contained in the unit. It would be issued to Terry Todd and Dan Allhands. Their planned use for this unit is early spring (May 1 to June 10) grazing by cow/calf pairs and or yearling cattle. Because of the TEI controlled lands that are commingled, use by TEI bison would also occur as bison herds are moved between various pastures. This use by bison in this unit would be of a short-term nature.

Availability of water is currently a limiting factor for grazing cattle on this unit. Water is seasonally available from an irrigation canal (Peterson Canal) situated on TEI deeded land to the north, from an existing pipeline and tank on the south end of the unit, and from Spring Creek which flows through the southwest corner of the unit. To improve the distribution of use by cattle on the uplands, the existing pipeline would be extended and additional tanks would be strategically placed. Expansion of the pipeline and installation of the new tanks is planned for fall 1999. The proximate location of the existing and proposed pipeline and tanks are indicated on Exhibit 1.

Because of the agreement between the Lessees and TEI allowing both parties to use the acreage of the unit and the commingled TEI lands, no new fencing will be required. However, if the arrangement between these parties disintegrates, then fencing and installation of a cattleguard along the county road may become necessary.

### 3.1.1.3 Units 3 and 4

Units 3 and 4 share a common boundary and are situated in foothills and mountainous topography. Unit 3 is dissected by Cream and Spring Creeks, and contains approximately 3,095 acres. It has a rated carrying capacity of 733 AUMs. Unit 4 covers approximately 2,563 acres and has a rated carrying capacity of 776 AUMs. As noted previously, Ledford Creek crosses through this unit and provides water for stock.

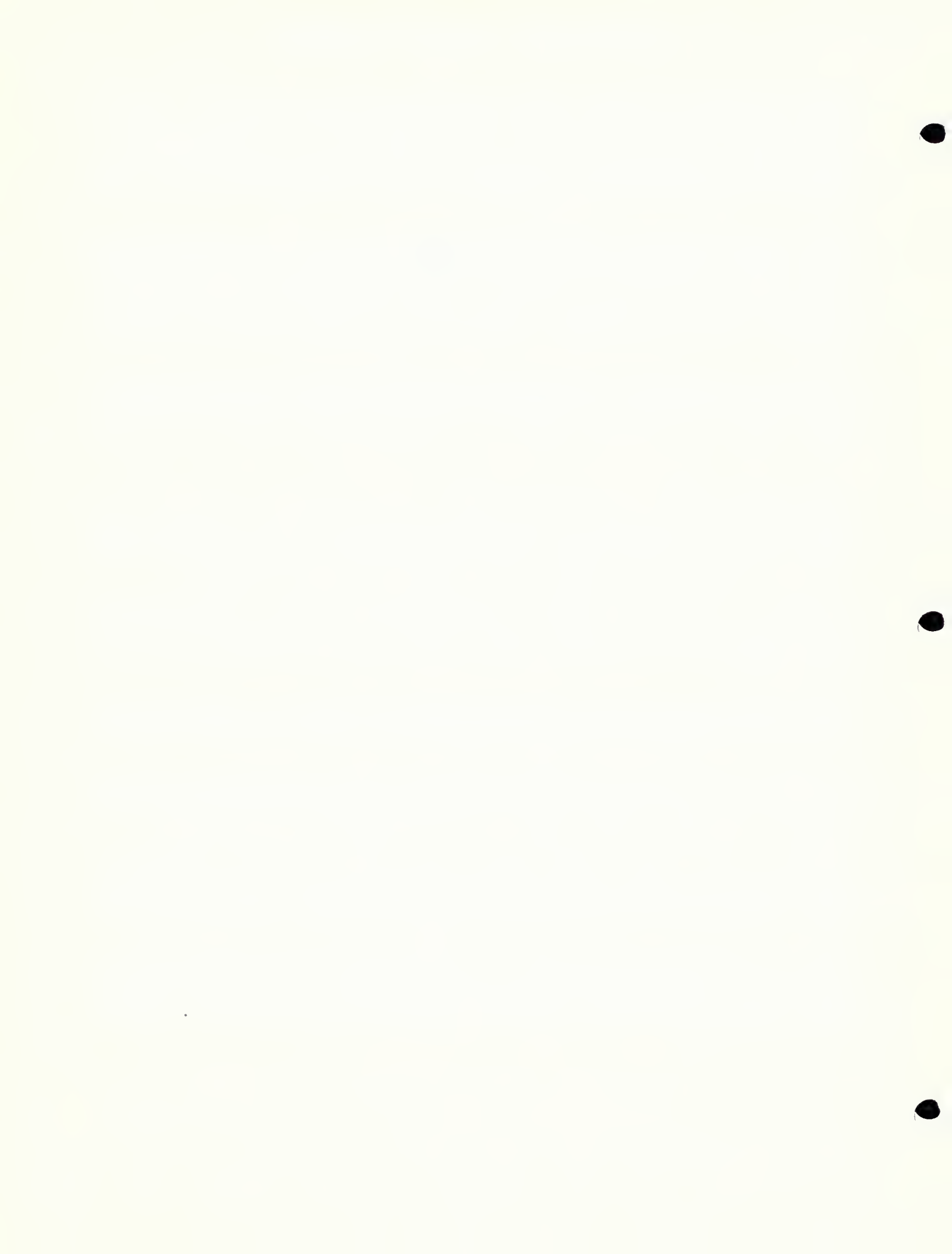
Unit 3 is bordered by Beaverhead National Forest lands to the east and south sides and in part on the west by part of the Robb Ledford WMA. Unit 2 and deeded lands bound the unit on the north side. Unit 4 has National Forest land to the east and south, and on the west and north sides it is bordered by portions of the Robb Ledford WMA.

Based on the bidding results the leases on Units 3 and 4 would be issued to TEI. These leases would provide TEI the right to graze livestock to a level not to exceed the carrying capacity established by TLMD, and preclude cabinsite development on the contained properties.

TEI's intent is to use these units for purposes of bison grazing. Some cattle grazing may occur on these units on an occasional and as needed basis by means of an exchange of use with neighboring operators. The planned use in 1999 for these combined units is to graze them as a single pasture with a herd of 1 ½ to 2 year old animals. However, the class of bison using these units would change in time to a mixed herd.

According to Dave Dixon, Snowcrest Ranch Manager for TEI, populations of larkspur (*Delphinium sp.*), a group of native plant species that are poisonous to cattle and bison, are present in Unit 3. Because of the presence of these plants and their toxicity to livestock, grazing by bison on the units is planned by TEI to be deferred until after July 1, and would carry through till late August (*Dave Dixon, personal communications*).

Water for animals grazing the premises of Unit 3 and 4 is available from Cream Creek on the east side, Spring Creek in the middle, and Ledford Creek on the west side. Because of the elevation differential, future water development is anticipated for the upland portion of Unit 3, but specific plans have not been developed. Cross fencing would also be considered an option in the future for these units if grazing does not appear to be appropriately distributed.



### 3.1.1.4 Fencing for Units 3 and 4

To ensure containment of bison on the premises of Units 3 and 4, approximately 15 miles of new perimeter fencing would be needed. Several factors including the disposition of bison, their ability to jump what they can see over (*Dave Dixon, personal communication*), and Montana's livestock containment laws (81-4-201MCA) necessitate construction of specialized fencing. Interior fences at the US Fish & Wildlife Service's (FWS) National Bison Range at Moiese consist of four foot high woven wire with the bottom being 18 inches above the ground surface and the top at 66 inches high. According to FWS personnel, these fences were routinely breached by bison prior to their modification, by adding two offset electric wires on each side of the fence at heights of 2 to 2½ feet and 4 to 4½ feet (*correspondence from National Bison Range to Chuck Ruzicka, Land Use Specialist with the TLMD, Dillon Unit Office*).

For this application, the proposed fence consists of 6 strand high-tensile smooth wire with wooden posts. The bottom wire would be approximately 16 to 18 inches from the surface of the ground and the top wire is planned to be at an approximate height of 57 to 59 inches. The other four wires would be spaced at roughly equidistant intervals ( $\pm 8$  inches) between the top and bottom wires. Alternate wires would be held with insulators so they can be charged with electricity as needed, and the top two wires would be fastened in such a manner so as to allow them to be let down. Posts would be spaced at an approximate distance of 18 feet. Swinging steel gates would be placed at strategic locations in the fence line to allow foot, horseback, and vehicular traffic to pass. Gates will also be placed in key locales at the specific request of the Beaverhead National Forest (Art Hall, Personal Communication). Additionally, cattle guards would be placed or upgraded in two locations where the fence crosses the Ledford Creek Road. EXHIBIT 2 (see Page 30) provides a structural diagram of the planned fence. The proximate location of this proposed fence is indicated on EXHIBIT 1. Along the boundary shared with National Forest Lands (particularly along Unit 4, the fence will be located as near as is practical to the common boundary. It is likely that there are segments where physical barriers or anticipated maintenance needs may dictate relocation or moving off line, but these areas should be held to a minimum. Placement along this shared boundary should be agreeable to the USFS, TEI, and to TLMD. The fence that currently exists along the proposed route would be removed.

Construction of the new fence would be initiated in the spring of 1999, starting at the northwest corner of Unit 4 and working in a counter clockwise direction. It is expected that approximately half of the fence would be constructed in 1999 and the balance would be completed in the year 2000.

### 3.1.1.5 Unit 5

Unit 5 is comprised of a dissected mountain foothills area. It encompasses approximately 3,620 acres and has a rated carrying capacity of 1059 AUMs. Unit 5 contains a segment of Robb Creek and also contains several of its unnamed tributaries. This unit is nearly fully contained within the bounds of the Robb Ledford WMA.

Based on the bidding results, the lease on this unit should be issued to the Ledford Creek Grazing Association. The packaged rights included therein would be livestock grazing to a level not to exceed the carrying capacity established by TLMD, the control of outfitting, and preclusion of cabinsite development within the area of the unit.

Also contained in this unit is a total of 640 acres of two sections that have shared ownership. On these lands DFWP holds a 6/7 undivided interest and DNRC administers the remaining undivided 1/7 interest. Additionally, DFWP holds a lease from TLMD on acreage that is fully contained in this unit. These factors necessitate cooperation between the LCGA and DFWP in the management of the unit.

The LCGA plans on grazing cow/calf pairs and some yearlings on the unit beginning about the second week of June and continuing through the 15th of October of each year. Representatives of the LCGA advise that fencing may be needed at some time in the future, but there are no concrete plans to that effect at the present time.



### **3.1.2 No Action Alternative**

Under the No Action Alternative, surface leases would not be issued. Because these properties were recently acquired and there are no existing leases, and because the TLMD has a fiduciary responsibility to generate revenues from the lands under its charge for the affiliated School Trust's, the no-action alternative is not considered a viable option.

### **3.1.3 Ten-Year Grazing Lease Alternative**

The TLMD considered issuing standard 10-year grazing leases and separate Special Recreational Use Licenses (SRULs) for outfitting on the acquired Snowcrest properties. This alternative would effectively limit the duration of the leases to a term of ten years, at which time they would be subject to renewal. Because the standard renewal preference right tends to stifle competition and bidding on future terms of lease, competitive bid rates for grazing would be expected only through the first term of the leases.

The unit boundaries as outlined under the preferred twenty-year lease alternative would apply under this alternative as well.

Under this alternative outfitting licenses would be offered and issued independently through competitive bidding if exclusive use outfitting permits were preferred, or on a set fee basis if non-exclusive use outfitting permits were preferred.

From the perspective of the TLMD, this alternative would generate a smaller revenue stream over the course of time than would the preferred alternative.

### **3.1.4 Thirty-Year Special Lease Alternative**

In this alternative TLMD would issue special leases of packaged rights for a term of 30 years. The unit boundaries as outlined under the preferred Twenty-Year Lease alternative, and the offering of control of outfitting and cabinsite development would apply under this alternative as well.

Due to the uncertainty of future economic conditions and trends over a 30-year lease term, TLMD believed that the longer-term leases would have to be structured with a periodic review and inflation based rate adjustment. However, these leases would be offered on a pilot basis, and the TLMD wished to keep rentals simplified.

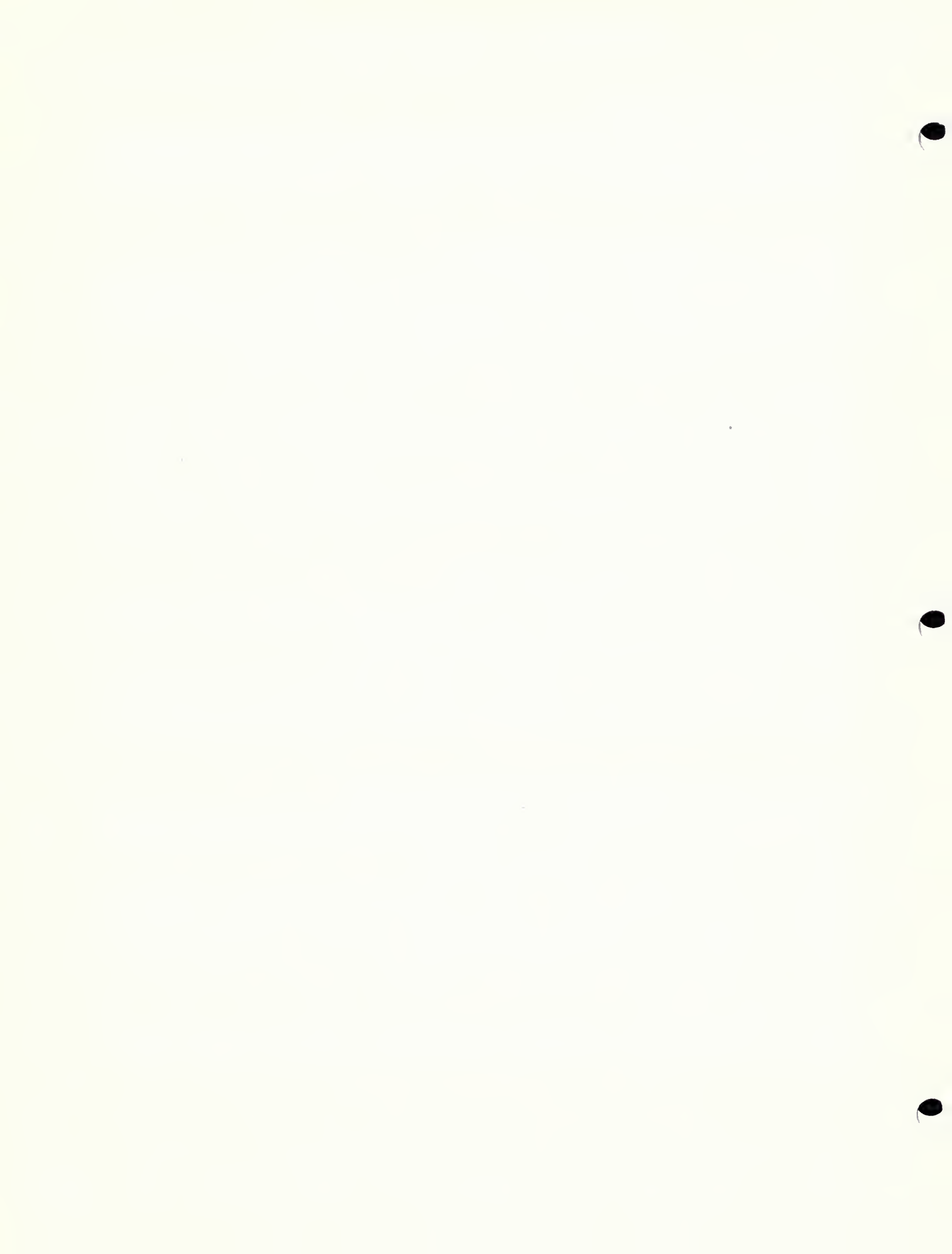
### **3.1.5 Land and or Management Exchange Alternative**

The DFWP tendered an informal proposal to the TLMD offering to exchange select blocks of the acquired property for other property owned by DFWP. As an option to that, an exchange of management involving certain DFWP property situated on Ledford Creek was suggested.

Under the physical exchange ownership of the affected lands would revert to DFWP, and other DFWP owned lands would be transferred to TLMD. Under the exchange of management option, ownership of the land would be unchanged, but management of select areas would be turned over to DFWP in exchange for granting TLMD management control of area lands owned by DFWP.

Under this alternative the Snowcrest properties unaffected by DFWP's proposal would be leased out as under the preferred alternative.

Based on the TLMD's review of that proposal, the terms offered did not meet the Land Board's exchange criteria; it was therefore rejected.



## 4.0 CONSEQUENCES OR EFFECTS OF THE PROPOSED ACTION

This section describes the potential and anticipated impacts, consequences and effects of the various alternatives on the human environment and natural resources. The order of consideration for specific effects in this document has no relation to their order of importance relative to the focus of this review.

### 4.1 Socioeconomic Effects

#### 4.1.1 Ranching Activities

Issuing the leases for the specified purposes would enhance the respective operations of the successful bidders and sublessees. More specifically, the grazing components of the individual leases would allow the associated parties to expand their respective operations with addition of the available forage base.

Issuing the described leases under the preferred alternative for a term of 20 years would also offer greater long-term stability to the lessees than would leases issued for the traditional 10-year lease term. Greater flexibility would also be realized by the lessees under the preferred alternative, due to more lenient subleasing than is allowed under traditional leases.

##### 4.1.1.1 Diseases

The subject of diseases of livestock is appropriate for consideration in this review as some diseases that they may contract or carry can be further transmitted to other species, including various wildlife species, bison, other domestic cattle, and humans.

In general, bison are subject to many of the same diseases as are cattle. The list of diseases that can be carried by either includes Brucellosis (*Brucella abortus*), and Paratuberculosis (Johne's Disease), among others.

##### 4.1.1.1.1 Brucellosis

Brucellosis or Bangs disease is an endemic infectious bacterial disease of cattle, bison, elk and various other ruminant animal species. It can also be transferred to other animals and to humans who come in contact with the bacterium. Because it causes pregnant cattle (and bison) to abort their fetus, the disease is economically damaging. The disease is caused by an infection of the bacterium *Brucella abortus*. Brucellosis is transmitted from infected animals of one species to another individual of the same or another species generally by means of contaminated fetuses, fetal fluid, or placental membranes. Brucellosis has been eradicated throughout most of the US, with only 26 infected herds of domestic cattle and bison being present in the United States today (APHIS). It is also widely known that the bison herds and some segments of the elk herds of the Yellowstone and Grand Teton National Parks area are infected with the disease. It is currently estimated that one to two percent of the animals in the northern elk herd of the greater Yellowstone area is infected with Brucellosis.

##### 4.1.1.1.2 Johne's Disease

Johne's disease is a common disease of cattle with broad distribution worldwide, though a few countries are free of its effects. The disease is found in all regions of the US, where its prevalence is estimated to be in the range of 5 to 20 percent of the total domestic cattle population, as indicated by testing of slaughtered animals (Johne's Disease, Cooperative Extension, Pennsylvania State University, University Park).

Johne's disease has not been widely tested for in cattle herds in Montana. Because of that and because most operations market animals that appear to be in failing health rather than invest in costly testing and treatment programs, the extent of the disease in state cattle herds is unknown at present, though it is believed to be broadly distributed.





It not only afflicts cattle, but Johne's disease also afflicts bison, sheep, goats, and other ruminants, including members of the deer family. (Cooperative Extension, Pennsylvania State University, University Park). This disease has been compared and often confused with Mad Cow Disease (BSE of Bovine spongiform encephalopathy in cattle), Chronic Wasting Disease (CWD or spongiform encephalopathy in members of the deer family), and scrapie, a similar disease in sheep. BSE, CWD, and scrapie are different than Johne's disease in that the first three are all transmissible spongiform encephalopathy (TSE), Johne's is not. However, infected animals may outwardly exhibit some of the same symptoms (wasting away, though food consumption generally continues). TSE afflicted animals exhibit degeneration of the nervous system and significant loss of body weight. Additionally, the brain cells of animals afflicted with the various forms of TSE exhibit a spongy appearance when sections are viewed under a microscope. Animals afflicted only with Johne's disease do not exhibit these last symptoms.

Through no cases of BSE have been documented in the United States, CWD has been diagnosed in several western states. It has been diagnosed in captive mule deer, blacktail deer, and whitetail deer in Colorado and Wyoming, and in elk herds on game farms in South Dakota (Chronic Wasting Disease, Veterinary Services, USDA, Animal and Plant Health Inspection Service (APHIS), February 1998). Scrapie is not uncommon in sheep herds, with the disease being diagnosed in over 900 flocks in this country since the disease was first diagnosed in the states in 1947 (Scrapie, Veterinary Services, USDA, Animal and Plant Health Inspection Service, February 1998). However, there are no confirmed cases of scrapie from sheep herds within the State of Montana (Linfield, personal communications).

At the present time, the causative agents for the various TSEs are known to be smaller than the smallest known virus and they have not yet been completely characterized (Bovine Spongiform Encephalopathy, Veterinary Services, USDA - Animal and Plant Health Inspection Service, April 1998). In contrast, Johne's disease is caused by a bacterial infection. Advanced infections of Johne's disease result in inflammation and thickening of the intestinal tract leading to severe weight loss and diarrhea. The bacterium is spread primarily through the feces of diseased animals. (Nebraska Cooperative Extension, University of Nebraska Lincoln). Because the primary means of spread for the disease is contaminated manure, it is most problematic in operations such as dairy herds and other close confinement operations.

#### **4.1.1.1.3 Herd Health Program for the Source Herds**

The Flying D Ranch herd from which bison grazing the subject properties would originate, is subject to a rather aggressive testing, vaccination, and herd health program (Gertonson, personal communication). The animal health program on the ranch includes testing and vaccinating for Brucellosis, and despite extensive testing, this disease has not been identified in any animals of the herd. Through their testing program, Johne's disease was diagnosed in animals of the flying D herd, though never in animals under six years of age (Layton, personal communications). All animals exhibiting clinical signs of the disease or testing positive for it are culled from the herd.

The source herds for the domestic cattle, which would be grazing the areas of Units 2, and 5, are subject to regular testing and vaccination programs. However, testing specifically for Johne's disease on these animals has not been conducted.

#### **4.1.2 Outfitting**

Authorization to control of outfitting on the properties would allow the successful bidder to contract with an outfitter licensed by the Montana Board of Outfitters to bring clients onto the premises of the respective unit for purposes of hunting or fishing. Under the leases to be issued, the lessee (bidder) may also elect not to take advantage of this activity. Prior to operating on the subject properties by means of this element of the Special Leases must obtain a Special Recreational Use License from the TLMD at no charge.



**Note:** When control of outfitting in Units 3 and 4 was not bid upon during the bidding process for the special leases being evaluated herein, the TLMD subsequently advertised and accepted bids on an exclusive use license for outfitting on the acreage of these two units. The five-year SRUL has since been issued to the high bidder in the competitive bid process. This exclusive use license restricts the TLMD from licensing another outfitter to operate on the acreage of Units 3 and 4 during the five-year term of that license.

#### **4.1.2.1 Outfitting Versus Recreation**

The allowance of outfitting on the subject properties does not exclude the ability of members of the general public to recreate on these lands. Any member of the public who possesses a valid state Recreational Use Permit may recreate on the subject properties within the guidelines set forth in the state RULES FOR RECREATIONAL USE OF STATE LAND.

#### **4.1.3 Conflict Between Bison Grazing and Recreational Activities**

There is potential for conflict between the planned bison grazing and future recreational use of Units 1, 3, and 4. The level of conflict or danger would vary depending on the time of year and the class of bison that were present. In general, a herd of young non-breeding age bison would likely pose little threat to a recreationist afoot. When approached by a person afoot, bison of this age class tend to flee.

Though they are still somewhat timid and will often flee, older bison do tend to be more unpredictable and aggressive, particularly when cornered or when approached too closely. This is particularly true of adult bulls during the breeding season, which takes place in August for the TEI operation. Additionally, cow bison are relatively protective of their young calves. Bison are also relatively fleet afoot and can run at speeds up to 35 miles per hour. The combination of speed and unpredictability can pose a real hazard to a recreationist who might venture too near a mixed herd of mature bison at breeding time, or too near a young calf separated from its mother cow.

Also affecting the situation is the relative familiarity of the bison to the presence of humans in their midst and on foot. If animals, bison included, are not accustomed to humans afoot, then they will be more inclined to flee when presented with that set of circumstances. Conversely, animals that become accustomed to the presence of man, tend to lose fear and can pose more of a hazard or risk under some circumstances.

There is also a potential for conflict between recreationists on horseback who may approach bison too closely. Bison are defensive of the area they occupy and are resultantly intolerant of other species that approach within too close a range (50 feet). Also, from a perspective of the ladder of social dominance, bison are dominant over horses. This combination of factors may lead to bison charging riders on horseback who may venture too closely to them. To minimize risk of conflict riders should keep a safe distance from bison and keep alert when in the proximity of the animals.

As noted elsewhere in this document the planned grazing by bison is seasonal. Use for Unit 1 is planned for early (May 1 – June 1) and then late in the growing season (August – September), and planned use for Units 3 and 4 is July through late August. For the most part these time frames coincide with periods when use by recreationists is expected to be relatively light.

Though there may be individuals seeking recreational pursuits on the premises at any time during the year, the majority of recreational use is expected to occur from the third Saturday in May through late November. These dates envelop opening day of the general fishing season and closure of the general big game hunting season. During most of this time frame recreational use is expected to be relatively light. Use levels are expected to peak during the last month and a half, which corresponds to the general big game hunting season. A smaller peak in use is expected to occur during the archery season, which runs from about the end of the first week of September and runs through mid-October. During most of these periods, there will be no bison on the properties.



Because of the noted conflicts, steps such as adequate signing (which has proven effective on the Flying D Ranch in the past) and other undeveloped mitigation actions may be deemed necessary to address future concerns regarding public safety and property damage.

#### **4.1.4 Effects on Area Employment**

Outside of contracting with local providers by the successful bidders for procurement of materials and construction for the proposed fencing on Units 3 and 4, and for the proposed expansion of the stockwater pipeline on Unit 2, there are no foreseeable effects on area employment. Because TEI proposes construction or replacement of approximately 15 miles of new fence, and intends to utilize area sources for purchase of materials and construction, local communities and would experience some economic benefit. Overall however, the effects are not considered significant.

#### **4.1.5 Effects on Taxes**

The proposed lease issuance is not expected to have much of an impact on personal property tax revenues for Madison County, though there will likely be some change because from a taxable value basis, bison have a higher value than do domestic cattle of the same age class and status. Consequently, the associated personal property tax paid for bison is correspondingly higher than for domestic cattle. For perspective, the 1998 taxable value of a breeding-age class domestic cow in Montana was \$316 as compared to \$428 for a like bison. This amounts to an assessment on bison that is approximately 35 percent higher than for domestic stock of like classes.

State Income Tax would also be expected to be generated from fees paid to contractors and their laborers for services provided in construction of the proposed fence and expansion of the water line, and from profits derived from sale of materials for construction of the same. Additional income tax revenue (State and Federal) can also be reasonably expected to result from the allowed expansion of the lessees operations.

#### **4.1.6 Demand for Government Services**

Issuing the five special leases for the specified uses would not impact or create additional need for governmental services. However, some associated requests are expected to occur for financial and technical assistance from local USDA, NRCS and FSA offices, and from the DNRC, Water Resources Division for water right matters, but these would not be consequential or add significant workload to the affected agencies.

#### **4.1.7 Effect on Trust Revenues**

Under the Twenty-Year Lease option at the current carrying capacities for the units and as bid by the prospective lessees, the five leases would generate revenues to the associated trusts amounting to \$79,268.99 annually. There is some possibility for some increase in that amount, because of potential increases in AUM ratings on irrigable acreages of Units 1 and 4. The likelihood for any sizeable increases under this scenario is minimal. Cumulatively, over the life of the twenty-year lease terms, the revenues generated for the respective trusts from the subject properties would exceed 1.5 million dollars.



Projecting revenues for the other alternatives is speculative at best. However, under the ten-year alternative, TLMD would expect annual revenues to be somewhat less than the preferred alternative because of the rights other than grazing that were bundled in the package for the twenty-year alternative. At the end of the first ten-year term the leases would be up for renewal, and because relatively few State leases are ever bid upon during the renewal process, it is expected that the rentals on the leases would revert to the prevailing minimum rate. Using today's prevailing minimum grazing rental of \$4.40 per AUM, the rated carrying capacity for the properties of 3,345 AUMs, and allowing for a 100 percent increase in the minimum rental, results in a projected annual rental of \$29,436. Even when allowing for an inflation factor of 100 percent in the minimum rental results in a sum that is considerably less than the annual rentals under the preferred alternative. However, the preferred alternative does include some value for the other packaged rights, and the rental projections for the ten-year alternative leases do not.

Under the thirty-year alternative, TLMD hypothesizes that annual revenues would be comparable to the preferred alternative.

## **4.2 Impacts and Effects on Natural Resources**

This section discusses anticipated and potential effects of the alternatives on natural resources associated with the properties.

### **4.2.1 Effects On Soils**

Overall, little impact to the soils is expected to result from issuance of the leases. However, because bison tend to use uplands more than do domestic cattle, the steeper slopes between the stream bottoms and benches on Units 1, 3, and 4, would probably be subject to more trailing by bison going to water as opposed to domestic cattle. Additionally, as bison dust themselves, they tend to develop wallows in their summer ranges. These wallows can be up to a foot deep and ten feet across.

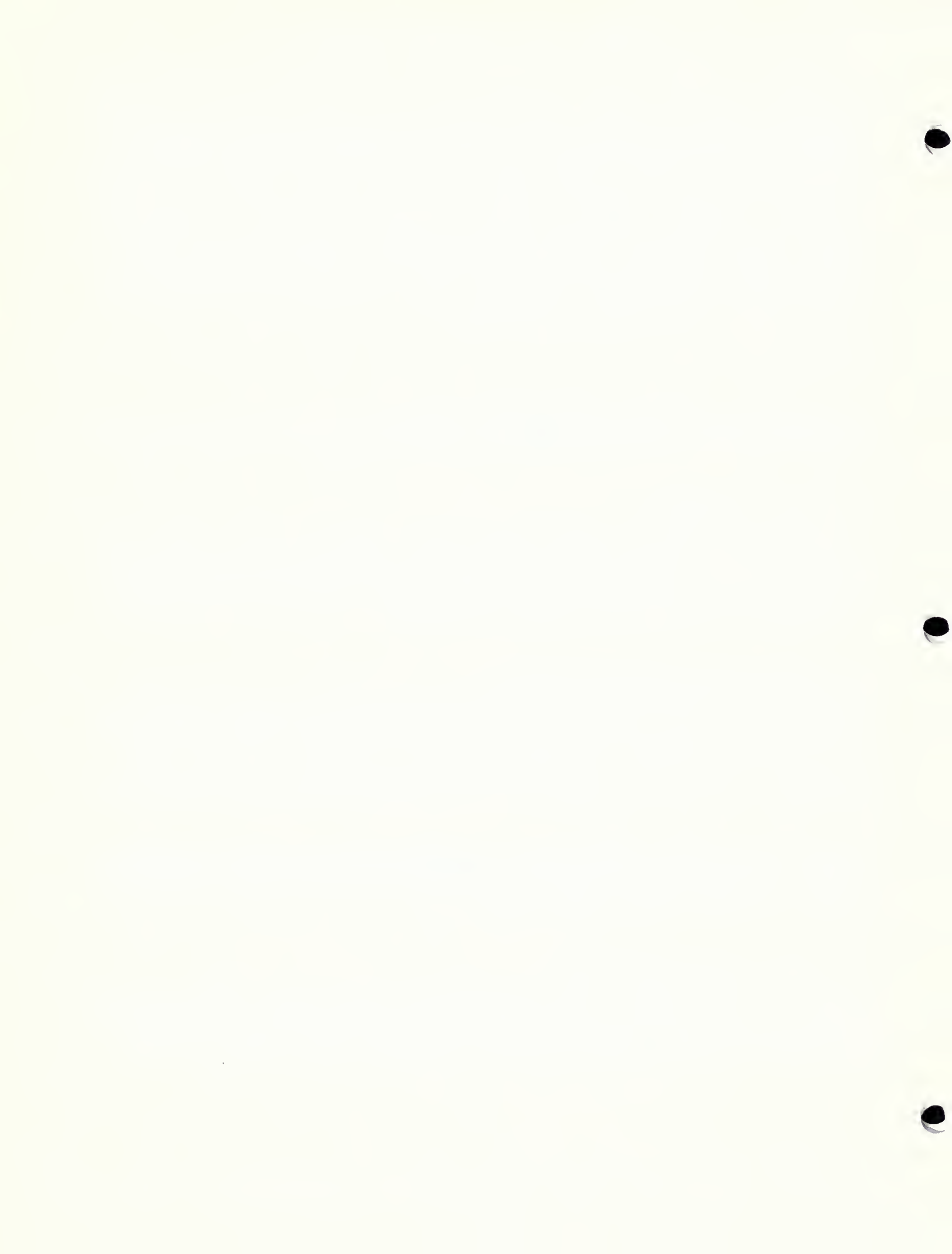
### **4.2.2 Effects of Grazing on Vegetation**

The grazing that would be permitted under the licenses that are under consideration are expected to have no consequential effects on the existing plant communities. Through time however, some shifts in community composition can and would occur on a localized basis. Some communities would advance toward climax or potential for the site, and others would undergo some digression or divergence from the same. Still other communities would remain relatively unchanged from their present state. Changes or shifts that would occur during the term of the licenses are not expected to be notable, provided grazing activities are appropriately controlled.

With respect to the plant species categorized as rare and or sensitive and observed on the properties, these populations remain despite and perhaps in part due to the grazing that has been on going on the properties for years. The grazing use by cattle and bison that would continue under the special leases is not expected to impact these populations to any consequential degree.

### **4.2.3 Effects on Riparian Areas**

The anticipated effects of the proposed activities on the riparian areas of Cream, Ledford, Robb, and Spring Creeks are mixed, but mostly positive. The riparian areas of Ledford Creek in particular have seen extensive grazing pressure, trampling, and compaction in the past, which has led to degradation of the riparian zone. Because bison tend to utilize uplands to a greater degree than do cattle, thereby reducing pressures on the riparian zones, opportunities exist for improvement in this all-important zone in the associated units.





#### 4.2.4 Effects on Water Resources

Coinciding with projected improvements in the overall condition of the riparian area, should be paralleled with a corresponding improvement in water quality. As streamside vegetation recovers from past uses, soils will be less subject to erosion, and the additional streamside vegetation will more effectively filter out soils that are carried in water from runoff off of adjoining uplands. Additional improvement in water quality is also expected in particular for Ledford Creek as a result of less manure being cast directly into the streams and onto the banks of the streams by bison, as opposed to domestic cattle. Because cattle spend considerable more time lingering in riparian areas than do bison, the amount of manure deposited by bison in the riparian zone is much lower than for cattle.

#### 4.2.5 Effects on Aquatic Wildlife

Over time and as changes are made in management on the land and resulting improvements are made in water quality and in protection of the streambanks, gradual and corresponding improvement should arise in the suitability of the streams as fish habitat. These improvements should result in improved health and increased numbers of the fish populations in the affected streams.

#### 4.2.6 Effects on Terrestrial Wildlife

As for potential impacts to terrestrial wildlife, no species is expected to be effected to a significant degree, by the grazing activities being considered; or by the proposed fencing associated with Units 3 and 4. Because of its height when fully erected, the planned fence will likely effect wildlife movement to a certain degree.

One species of concern, particularly with the perimeter fencing for these units, might be elk. This is because local elk populations do use portions of Units 2, 3, 4, and 5 in conjunction with surrounding uplands seasonally for winter range. Though presence of a fence of the proposed design does hinder elk movement, it is not a barrier, nor does it present a significant health risk. Elk can and do cross fences of this type and height, and they can go over fences that are higher, as can other game species.

Correspondence from FWS personnel at the National Bison Range advises that when driven by hunters, both cow and bull elk there have jumped the seven-foot high perimeter fencing. Though bull elk usually go over the fences, the cows prefer to go under, as do most other game species including deer, antelope, bighorn sheep, and mountain goat (National Bison Range correspondence to Chuck Ruzicka).

Only during mid-summer while bison are grazing these units would all wires of the perimeter fence for Units 3 and 4 be kept taut. To allow more wildlife to pass more freely during times when the Units are not being grazed by bison, the top two wires of the fence will be let down and the third will be slackened. This would effectively result in a top wire height of 36 to 40 inches along most of the fence's length, which is lower than the top wire height of 42 inches for a standard 4 strand barbed-wire fence.

Allowing two weeks at the beginning of the grazing period to set or erect the fence, and a like time following the end of the planned grazing season to let it down, the top wires of the fence would be taut for only a three month period each year. The balance of the year or nine months out of twelve including the critical winter season the fence should be no more than a hindrance to wildlife movements. During this time of year it would be no more obtrusive to movement of elk or other wildlife species than would a barbed wire fence built to standard specifications.

Also, the hot wires would typically only be charged with electrical current until the bison become acclimated with the location of the fence and gain a respect for it. Usually the charger(s) can be turned off after the bison are accustomed to the fences, though they may still have to be powered up on occasion.



From a disease perspective, there is no evidence indicating that bison from the Flying D herd or the domestic cattle that would graze Units 2 and 5, pose a health threat to deer or elk inhabiting the area of the Snowcrest properties. Despite laboratory testing of tissue samples taken from more than 100 elk harvested from the area of the Flying D Ranch, not a single incidence of elk having Johnne's disease has been diagnosed (Layton, personal communication). Additionally, domestic cattle herds have grazed in the local area for a century or more with great probability that some animals of those herds were infected with transmissible diseases, with no apparent disease transmission problems. Also, bison have grazed the subject properties and other local properties since it was acquired by TEI in 1993, all with no apparent disease transmission problems.

#### **4.2.7 Impacts to Cultural Resources**

Most of the activities associated with issuance of grazing leases on the state acquired Snowcrest tracts would have no impact to cultural resources. The construction of a proposed stockwater pipeline and associated watering tanks, however, may impact cultural resources if cultural properties are located in the affected areas. The affected areas would be inspected prior to initiation of these ground-disturbing activities.



## **5.0 PERTINENT ENVIRONMENTAL DOCUMENTS AND PLANS**

Following is an overview of the environmental plans and documents relating to the subject properties.

### ***5.1 Turner Land Exchange Environmental Assessment***

A rather extensive review and environmental assessment was completed for the exchange through which the subject lands were acquired.

### ***5.2 Robb-Ledford Management Plan***

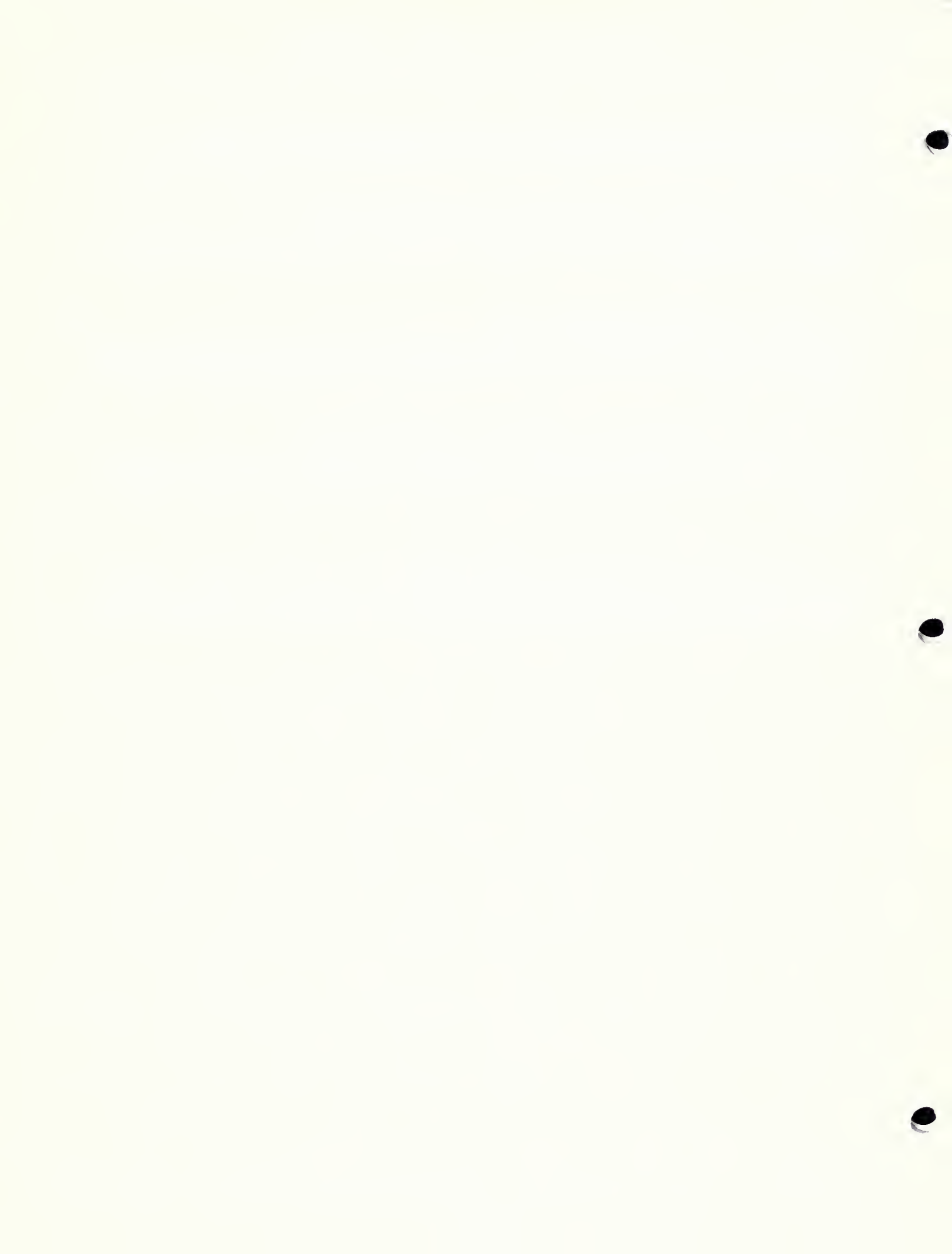
DFWP Management Plan for Rob/Ledford Wildlife Management Area - DFWP has completed a draft management plan for the Robb/Ledford Wildlife Management Area. The plan lays out DFWP's objectives and plans for the WMA.

### ***5.3 WestSlope Cutthroat Trout Conservation Agreement***

Conservation Agreement and Management Plan for WestSlope Cutthroat Trout - Currently in draft stage. This management plan has potential implications on the future management of Unit 5, though no detail is provided.

### ***5.4 Noxious Weed Management Agreement***

Cooperative Integrated Noxious Weed Management Agreement - Agreement between DNRC & Madison County Weed District Board regarding control of noxious weeds on lands owned by the state and administered by the TLMD in Madison County.



## 6.0 MITIGATION MEASURES

Based on comments received on the Draft EA, the following mitigation measures were designed.

### 6.1 *Fencing*

To mitigate concerns of the fence effecting movement of area wildlife, the fence proposed for the perimeter of Units 3 and 4 will be constructed in such a fashion so that the top two wires can be let down, and the third wire slackened. This will effectively put the top wire height during the off season at heights of 36 to 40 inches, which is lower than the typical top wire height of 42 inches for a standard four strand barbed wire fence.

Allowing two weeks at beginning of the grazing period to set or erect the fence, and a like time period following the end of the planned grazing season to let it down, results in the top wires of the fence being taut for only a three-month period each year. The balance of the year or nine months out of twelve the fence should be no more than a hindrance to wildlife movements. Thus, during the critical winter season, the perimeter fencing for Units 3 and 4, would be no more and probably less obtrusive to movement of elk or other wildlife species than would a standard barbed wire fence.





## **7.0 JURISDICTION OF OTHER AGENCIES**

The following Local, State, and Federal agencies have jurisdiction in one level or another over specific activities proposed under the Special Leases being considered herein.

### **7.1 *USDA – Natural Resource Conservation Service***

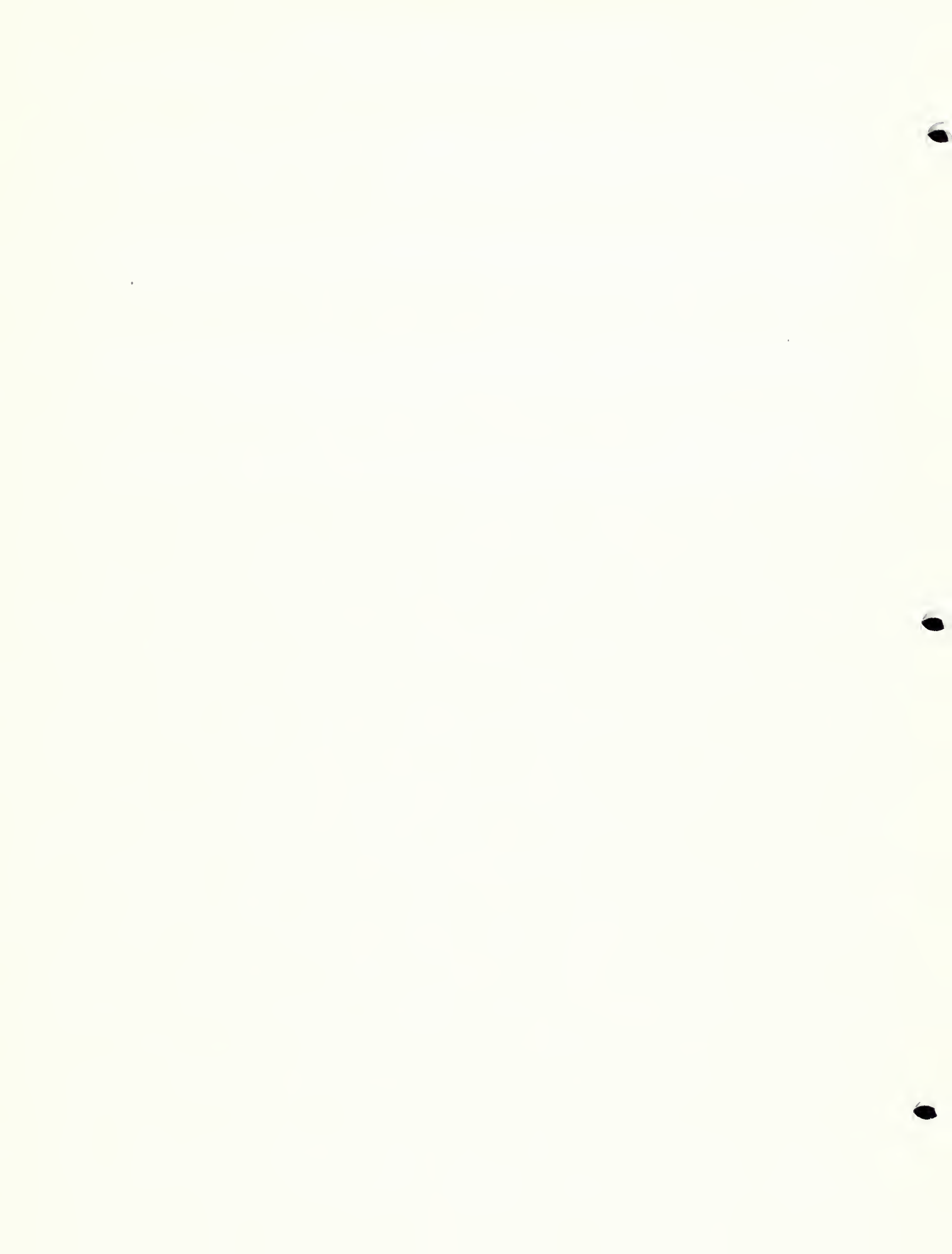
The Natural Resource Conservation Service (NRCS) has involvement in the planning process and cost sharing of the stockwater pipeline expansion in Unit 2.

### **7.2 *DNRC – Water Resources Division***

The Water Resources Division of DNRC has ministerial authority over water rights in the State. New water rights must be acquired from that office for expansion of the pipeline system planned for Unit 2.

### **7.3 *Madison County***

Madison County and particularly the Madison County Roads Department, has jurisdiction over placement of proposed cattleguards along the Ledford Creek Road in Unit 4.



## 8.0 CONSULTATION AND COORDINATION

Through the process of preparing and considering the alternatives outlined herein and developing mitigation measures a number of resource managers and professionals were contacted. Following is a list of the parties and agencies contacted.

Public input and comment was sought by the Department of Natural Resources and Conservation and it's forerunner the Department of State Lands as required by MEPA throughout the land exchange review process.

Within DNRC, TLMD, the Administration and select staff of the Agricultural and Grazing Management and the Special Use Bureaus, and Central Land Office conferred in developing the leasing alternatives and strategies.

A Departmental Press Release was offered advising that the TLMD was offering special leases on the properties on a sealed bid basis.

The leases were advertised by TLMD for bid in area newspapers for two consecutive weeks.

Interested parties were invited to be present at the bid opening.

The successful bidders were contacted and asked to provide input regarding their planned use, and the improvements they planned for the respective units.

Information regarding Chronic Wasting Disease, a disease of the cervids (elk, deer, moose, and caribou) was solicited from the Montana Department of Livestock.

A discussion was held involving TLMD personnel; Dave Dixon, Snowcrest Ranch Manager; and Bob Brannon, DFWP Wildlife Biologist to discuss potential impacts and concerns of the special bison fences planned for Unit 3 and Unit 4 on area wildlife.

Information was solicited from staff at the US Fish and Wildlife Service - National Bison Range at Moeise, regarding the fencing there and the effects it has on wildlife movement.

A round-table discussion was held between TLMD personnel and Dr. Arnold Gertonson, State Veterinarian with the Montana Department of Livestock, and Dr. Arthur Layton, Laboratory Veterinarian with the Montana Department of Livestock Animal Health Diagnostic Lab. Focus of the discussion was the topics of bison diseases, their transmissivity to domestic and wild ungulates and to humans, and the animal health program on the Flying D Ranch, TEI's source herd for the bison that would stock the affected units.

Information regarding diseases of cattle and bison was obtained from various sources.

A preliminary review of the Draft EA was completed by TLMD Staff and by pertinent information sources, prior to its' being released for public review.

May 11, 1999 - After final editing, a Notice of Availability was published in three area newspapers and copies of the Draft EA were distributed.

Written comments were accepted through May 28, 1999.

June 7, 1999 - A summary of the written comments received and TLMD's responses was prepared. Mitigation strategies were also developed for fencing concerns brought forth in the public comments.

A preliminary review of the Comment Summary and Final EA was conducted by TLMD staff.

The Comment Summary and Final EA was revised based on internal TLMD review.



## 9.0 PREPARER'S RECOMMENDATION

After review the pertinent information and alternatives offered, it is recommended that the Department issue the five Special Leases to the top bidders for a term of Twenty Years as described in this document. This alternative results in a substantial increase in revenue over traditional leasing procedure, without any apparent adverse impacts of significance. All the issues needing mitigation have been satisfactorily addressed.

Thus, it is the judgement of the preparer that no further analysis is required in this matter.

EA Prepared by :

Dave Mousel

6-24-99

Dave Mousel, Land Management, Section Supervisor  
Agriculture and Grazing Management Bureau,  
Trust Lands Management Division, DNRC

Date



## 10.0 FINDINGS OF DECISION MAKER

As a whole, the Madison County lands acquired from TEI in the Snowcrest Exchange possess qualities that make it suitable for a variety of uses. Though the specific qualities and attributes do vary from one tract to another, the land is generally suitable for livestock grazing, cabinsite development, wildlife habitat, hunting, fishing, and other types of recreational pursuits, and other potential uses.

In consideration of the TLMD's fiduciary responsibility to the associated Trusts, TLMD should endeavor to optimize revenue from as many of these potential uses as it can. Issuing Special Leases that provide prospective lessees various packaged rights on these properties is a means of capturing values that would otherwise be difficult to value and or capture any monetary return from.

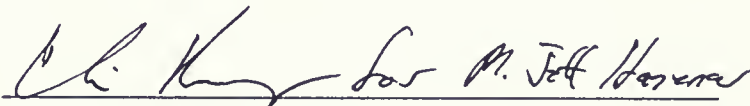
As the preceding text shows, considerable effort was expended in the matter of reviewing the proposal to issue special leases on the acquired properties. Based on the lay of the land, existing features, and the previously listed potential uses, it is logical to break the land out into the five designated units and offer prospective lessees opportunity to bid on each unit separately.

Issuing leases for a duration of twenty years would also result in an increased stream of revenue as compared to a shorter term (ten-year) lease. Of the various alternatives offered to and considered by TLMD and discussed herein, the Twenty-Year Lease alternative appears to provide the greatest return to the Trust, with the fewest leasing complications.

In the judgement of the TLMD there are no impacts of effects of the proposed actions that are considered significant. Of the concerns brought forward in the public review of the Draft Environmental Assessment, only the issue of potential effects of the special fencing proposed for the boundary of Units 3 and 4 on seasonal wildlife movements, required mitigation. Stipulating that the upper two wires be let down and the third slackened while bison are not in Units 3 and 4 to more wildlife to move more freely, satisfactorily mitigates this fencing concerns. In addition to getting prior approval from TLMD, lessees will also be required to confer with the local Forest Service District Office and or Fish Wildlife and Parks Offices on fence location and construction standards when they propose fencing along unit boundaries shared with these agencies.

I believe all the necessary issues have been adequately addressed in this document and no further assessment is required. it is therefore my decision to issue the five Special Leases as described in this Environmental Assessment.

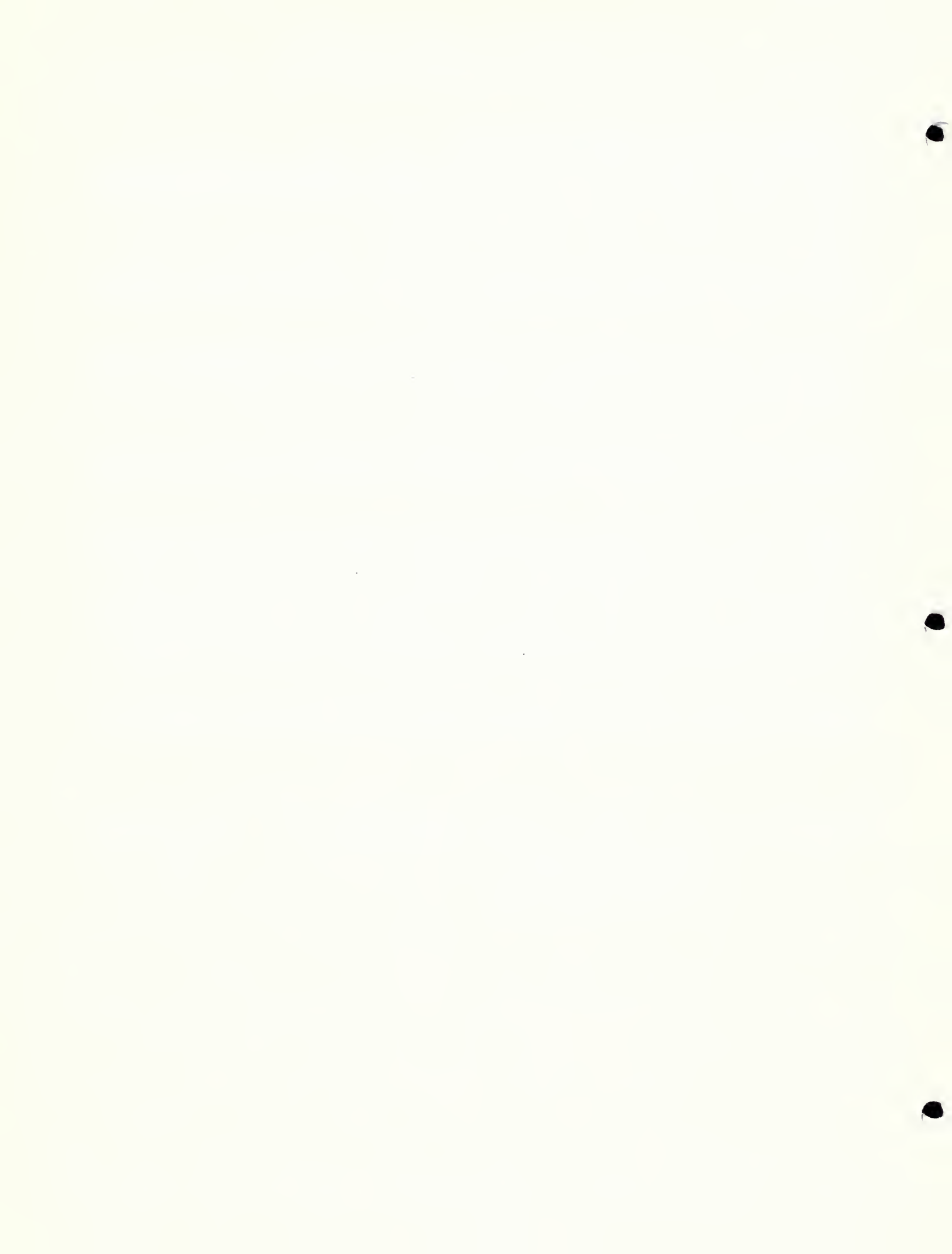
EA Approved by:



M. Jeff Hagener, Administrator  
Trust Land Management Disision

6-24-99

Date





## DEFINITIONS

**Animal Unit - (AU)** A 1000 pound cow with a calf up to 3 to 4 months of age at her side, or the equivalent thereof (two 7 to 12 month old cattle, a cow bison with calf, five sheep, etc). Mature bulls (24 to 60 months of age) have an AU equivalency of 1.5 per head. Long yearlings (young cattle and bison from 12 to 17 months of age) have an AU equivalency of 0.75 per head, and mature horses have an AU equivalency of 1.25 per head. (Montana Extension Service Montguide 9111, May 1991)

**Animal Unit Month - (AUM)** The quantity of forage required to sustain an Animal Unit for a period of one month (30 days). This equates to approximately 780 pounds of dry matter consumption per month or 26 pounds per day.

**Carrying Capacity** - The estimated amount of forage that can be grazed from a specified area in a single year under average conditions and on a sustainable basis without causing resource degradation. As a general rule, more forage would be produced and available in a wet year, and less forage would be produced in a dry year.



## ACRONYMS

APHIS – Animal and Plant Health Inspection Service of the United States Department of Agriculture

B-DNF – Beaverhead – Deerlodge National Forest

BSE – Bovine Spongiform Encephalopathy

CWD – Chronic Wasting Disease

DFWP – Montana Department of Fish, Wildlife, and Parks

DNRC – Montana Department of Natural Resources and Conservation

EA – Environmental Assessment

FSA – Farm Services Agency of the United States Department of Agriculture

FWS – Fish and Wildlife Service of the United States Department of the Interior

LCGA – Ledford Creek Grazing Association

MEPA – Montana Environmental Policy Act

NRCS – Natural Resources Conservation Service of the United States Department of Agriculture

SRUL – Special Recreational Use License

T&E – Threatened and Endangered

TEI – Turner Enterprises, Incorporated

TLMD – Trust Lands Management Division of the Montana Department of Natural Resources and Conservation

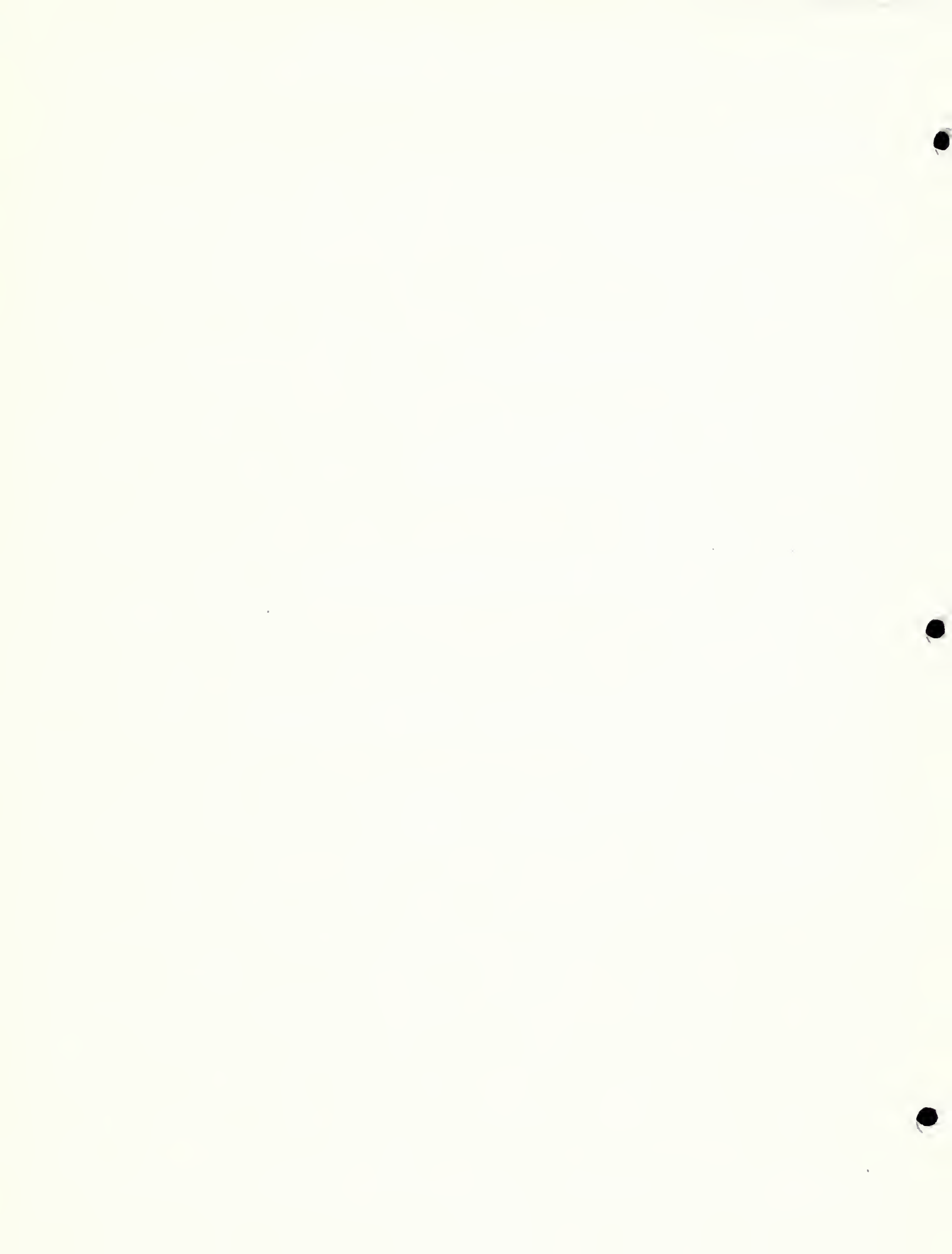
TSE – Transmissible Spongiform Encephalopathy

USDA – United States Department of Agriculture

USFS – United States Forest Service of the United States Department of Agriculture

WCT – Westslope Cutthroat Trout

WMA – Wildlife Management Area



## CITATIONS

Bovine Spongiform Encephalopathy, USDA, Animal and Plant Health Inspection Service, April 1998

Chronic Wasting Disease, USDA, Animal and Plant Health Inspection Service, February 1998

Dixon, Dave, Snowcrest Ranch Manager - Personal communications, April 1999

Hall, Art, Range Conservationist, Beaverhead NF, Sheridan Work Center - Personal Communication, April 1999

Gertonson, Arnold, DVM, State Veterinarian, MT Department of Livestock, Helena, personal communications, April 1999

Layton, Arthur, DVM, DACVP, MT Department of Livestock, Animal Health Division, Diagnostic Lab, Bozeman, Personal communications, April 1999

Linfield, Thomas, DVM, Veterinarian At Large, MT Department of Livestock, Helena, Personal communications, May 1999

Madison County Soil Survey, USDA, Soil Conservation Service, September 1989

Montana Code Annotated, Volume 10, Title 81, 1997

Scrapie, USDA, Animal and Plant Health Inspection Service, February 1998

Johne's Disease (Paratuberculosis), Cooperative Extension, Nebraska State University, Lincoln, NE, April 1990

Johne's Disease (Paratuberculosis), Cooperative Extension, Pennsylvania State University, University Park, PA, October 1993

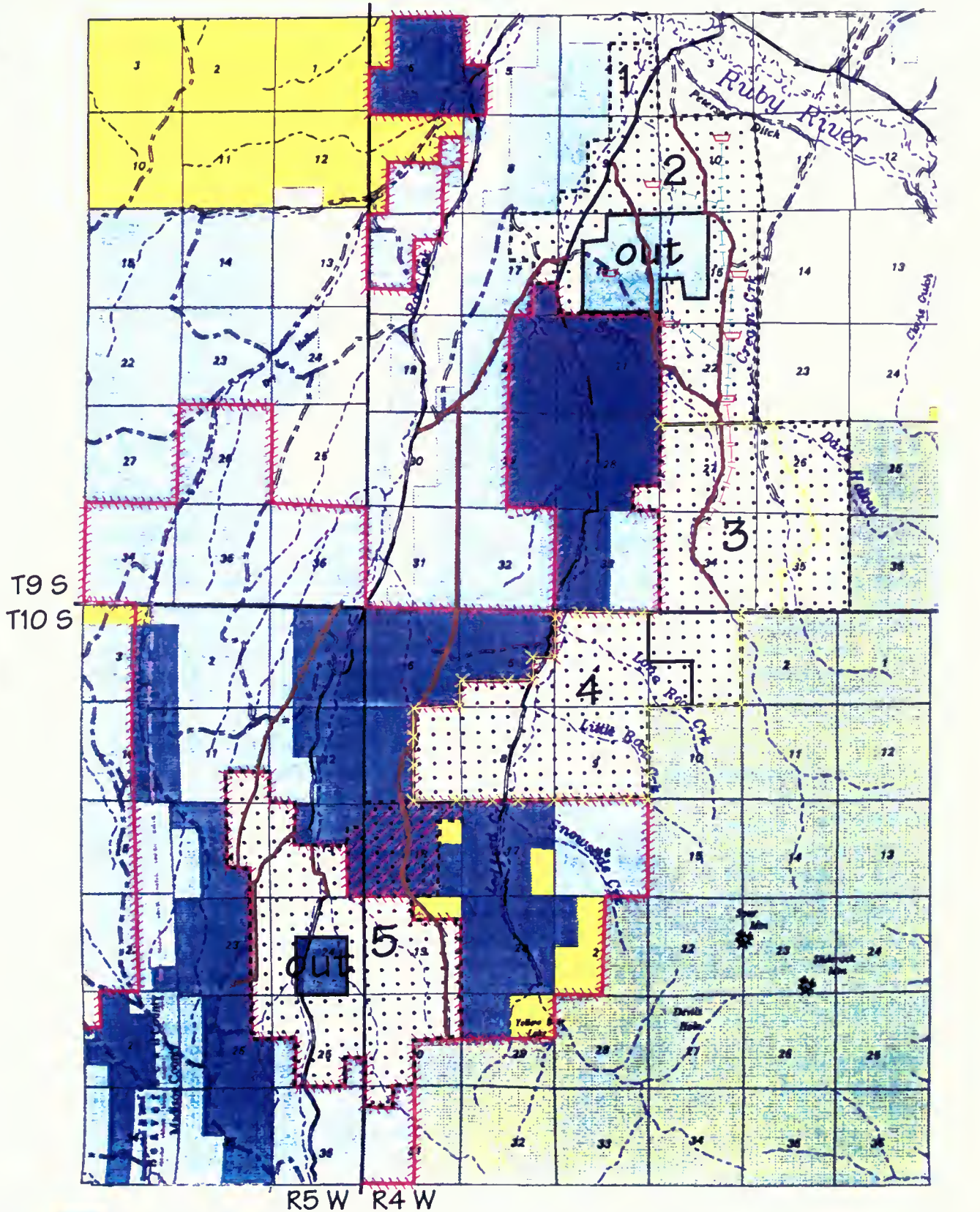
Robb/Ledford Wildlife Management Area Draft Management Plan, DFWP, March 1999















Turner Exchange Environmental Assessment, DNRC,

U.S. Department of the Interior, Fish and Wildlife Service, National Bison Range, Moeise, MT, Written communication, April 1999



# Exhibit 1: Land Acquired in Exchange — Snowcrest Ranch



- |   |                                       |   |                                       |
|---|---------------------------------------|---|---------------------------------------|
|  | School Trust Land                     |  | Land Acquired in Exchange             |
|  | Montana Fish, Wildlife and Parks Land |  | Robb-Ledford Wildlife Management Area |
|  | Bureau of Land Management Land        |  | Recreational Access Roads             |
|  | National Forest Land                  |  | Location of Proposed Fence            |
|  | Private Land                          |  | Unit Boundaries                       |
|  | Joint Ownership Area                  |  | Existing Pipeline                     |
|  | Planned Stock Water Tank              |  | Proposed Pipeline                     |





## SNOWCREST TRACT LEGAL DESCRIPTIONS AND AUMS

	SEC	TWP/RGE	LEGAL PORTIONS	ACRES	AUMS
UNIT 1	4	T9S/R4W	S2NE4, SE4, Less 23 acres lying east of the county road in E2SE4.	217.00	131
	9	T9S/R4W	SE4NW4, SW4SW4, NE4SW4, and those portions of E2 and SE4SW4 lying west of the county road	228.00	170
	16	T9S/R4W	Those portions of W2W2 and NE4NW4 lying west of the county road	106.00	28
	17	T9S/R4W	NE4, NE4SE4	200.00	31
	<b>TOTALS</b>				<b>751.00</b>
UNIT 2	4	T9S/R4W	That portion of E2SE4 lying east of the county road	23.00	3
	9	T9S/R4W	Those portions of E2 and SE4SW4 lying east of the county road	252.00	39
	10	T9S/R4W	ALL	640.00	132
	15	T9S/R4W	LOTS 1, 2, 7, 8, 9, 10, 13, 14, SE4SW4, SE4	487.52	94
	16	T9S/R4W	Those portions of W2W2 and NE4NW4 lying east of the county road	94.00	16
	22	T9S/R4W	LOTS 1, 2, 3, 4, E2W2, E2	652.77	133
<b>TOTALS</b>				<b>2,149.29</b>	<b>417</b>
UNIT 3	26	T9S/R4W	ALL	640.00	112
	27	T9S/R4W	LOTS 1, 2, 3, 4, E2W2, E2	668.86	188
	28	T9S/R4W	SE4SE4	40.00	16
	34	T9S/R4W	LOTS 1, 2, 3, 4, E2W2, E2	674.84	156
	35	T9S/R4W	ALL	640.00	96
	3	T10S/R4W	LOTS 1, 2, 3, 4, S2N2, SE4	431.78	165
<b>TOTALS</b>				<b>3,095.48</b>	<b>733</b>
UNIT 4	3	T10S/R4W	SW4	160.00	52
	4	T10S/R4W	LOTS 1-10, S2NE4, SE4NW4, SE4SW4, SE4, Part of HES No. 86	602.80	177
	5	T10S/R4W	LOTS 5, 6, SW4SE4, S2SW4, Part of HES No. 86	200.00	69
	7	T10S/R4W	E2	320.00	67
	8	T10S/R4W	LOTS 1, 2, 3, 4, 5, W2, SE4, Part of HES No. 86	640.00	197
	9	T10S/R4W	LOT 1, NE4NW4, S2NW4, NE4, S2, Part of HES No. 86	640.00	214
<b>TOTALS</b>				<b>2,562.80</b>	<b>716</b>
UNIT 5	18	T10S/R4W	W2, W2E2, NE4NE4 <i>State has undivided 1/7 interest (163 AUMs Total)</i>	520.00	23
	19	T10S/R4W	LOTS 1, 2, 3, 4, E2W2, S2NE4, SE4	553.36	201
	30	T10S/R4W	LOTS 1, 2, 3, 4, E2W2, NE4	478.24	156
	31	T10S/R4W	LOT 1	40.28	15
	11	T10S/R5W	S2SE4	80.00	25
	13	T10S/R5W	W2NW4, SW4, W2SE4, SE4NE4, E2SE4 <i>State has undivided 1/7 interest in SE4NE4 and E2SE4</i>	440.00	112
	14	T10S/R5W	NE4, N2SE4, SE4SE4	280.00	89
	23	T10S/R5W	E2E2	160.00	57
	24	T10S/R5W	W2SW4, E2SE4, N2 <i>Except an 8.26 acre tract in the NW4NE4NE4 and NE4NW4NE4</i>	471.74	167
	25	T10S/R5W	LOTS 2, 3, N2, N2SE4, NE4SW4	517.12	176
	26	T10S/R5W	E2NE4	80.00	38
<b>TOTALS</b>				<b>3,620.74</b>	<b>1059</b>
<b>GRAND TOTALS</b>				<b>12,179.31</b>	<b>3345</b>

TABLE 1



# HIGH TENSILE ELECTRIC FENCE

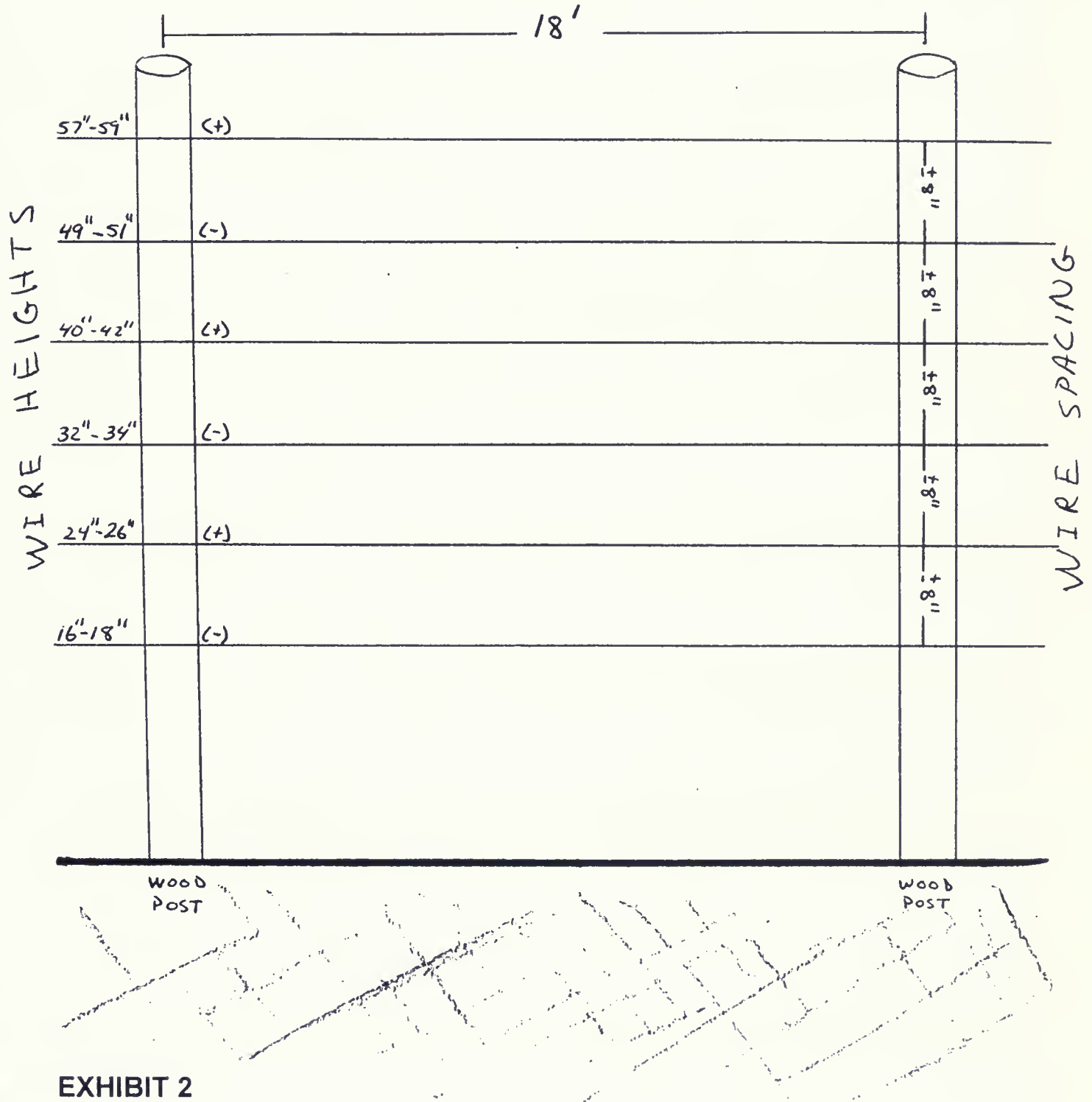


EXHIBIT 2



## SUMMARY OF PUBLIC COMMENTS RECEIVED ON THE SNOWCREST SPECIAL LEASE DRAFT EA

The Draft Environmental Assessment for issuance of five Special Leases on the acquired Snowcrest properties was completed on May 11, 1999. The public was notified of its availability by means of notices in three local newspapers: the Dillon Tribune (Wednesday, May 19, 1999), the Montana Standard (Sunday, May 16, 1999), and The Madisonian (Thursday, May 13, 1999). Copies of the Draft EA document were distributed, to the State Land Board Staff, Madison County Commissioners, prospective lessees, the parties and agencies who provided input and information used in preparation of the document, and to requesting members of the general public.

The comment period for the Draft EA was open from the time of its completion (May 11, 1999) through May 28, 1999. Written comments were received from three parties during the official comment period: the Montana Department of Fish, Wildlife, and Parks (DFWP, represented by Robert Brannon); the Montana Wildlife Federation (MWF); and Margie Taylor, representing Turner Enterprises, Incorporated (TEI). An additional comment letter was received from the Madison Ranger District of the Beaverhead-Deerlodge National Forest (B-DNF) after the close of the comment period.

Following, organized by general topic, is a summary of the issues brought forth in the letters received, each of which is followed by a response narrative from TLMD.

### 1. Fencing Issues

The MWF, DFWP, and B-DNF commented on issues related to the fencing planned for Units 3 and 4.

In his letter, DFWP Wildlife Biologist, Robert Brannon noted that the proposed fence not only effects the movement of elk, but it also hinders movement of mule deer, a factor that should be considered in the EA. He also provided clarification as to the reason for the minimum height of the lower wire, which is at 16 to 18 inches to allow for passage of antelope. Additionally, he noted that he had agreed that the top 2-3 wires be dropped to facilitate wildlife movements, not slackened as stated in the Draft EA. He further advised that "simply slackening the wires might not drop the height enough."

Similar concerns were brought forth in the letter from the B-DNF. In that letter it was noted that in order to allow for wildlife passage National Forest fencing specifications provide for a bottom wire height of 18 inches and a top wire height of 42 inches. Additionally, the B-DNF comment letter noted that the existing fence between National Forest lands and Unit 4 is not on line. It was suggested that the proposed fence be relocated to the property boundary, and the old fence be removed.

In their comment letter, The MWF states that the type of fence proposed for Units 3 and 4 is not acceptable to them, noting that the fence would impose unnecessary stresses on elk at critical times of the year. They suggest development of adequate mitigation efforts to ensure that elk migration patterns are not adversely affected."

### TLMD's Response

*TLMD acknowledges that when it is fully erected the perimeter fence as proposed for Units 3 and 4 may pose somewhat of a hindrance to movement of some species of wildlife. The affected species would likely include elk and mule deer, and the occasional whitetail deer, moose, big horn sheep and mountain goat that might also dwell on or move through the area of Units 3 and 4 on occasion. With the exception of moose, which are larger and less mobile than elk; and mule deer, which are readily capable of jumping fences of the height specified for the planned fence, these other species are likely to pass under the lower wire, similarly to antelope.*

*The Draft EA stated that while Units 3 and 4 are not occupied by bison the top 2 or 3 wires of the planned fence would be slackened. Based on the comments received from the parties noted above, Dave Dixon TEI's Snowcrest Ranch Manager agreed to have the fence constructed in such a manner so as to allow the top two wires to be dropped or let down. He further agreed to let the top two wires down and slacken the third when the pasture is not in use. This would effectively result in a top wire height of 36 to 40 inches along most of the fence's length, which is lower than the top wire height of 42 inches for a standard 4 strand barbed-wire fence.*



*Allowing two weeks at the beginning of the grazing period to set or erect the fence, and a like time following the end of the planned grazing season to let it down, would result in the top wires of the fence being taut for only a three-month period each year. The balance of the year or nine months out of twelve including the critical winter season the fence should be no more than a hindrance to wildlife movements. During this time of year it would be no more obtrusive to movement of elk or other wildlife species than would a barbed wire fence built to standard Forest Service specifications. From the perspective of TLMD dropping the top two wires and slackening the third during the off season effectively mitigates the noted fencing concerns with wildlife passage.*

*As for the actual placement of the proposed fence in relation to the boundary of Unit 4 and lands of the B-DNF, the fence is planned to be placed as close as practical to the common boundary. It is likely that there are segments where physical barriers or anticipated maintenance needs may dictate relocation or moving off line, but these areas should be held to a minimum. Placement of the fence along this shared boundary should be agreeable to the B-DNF, TEI, and TLMD. As for the old fence, TLMD agrees: it should be removed.*

## **2. Health Of The Existing Plant Community**

It was noted that the Draft EA suggests that herbivory by ungulates has affected the plant community, yet no baseline information or summary of the existing condition is provided. General information regarding other factors that have influenced the present state of the plant community is also lacking in the Draft EA.

### **TLMD's Response**

*An extensive assessment of the vegetative communities was completed as part of the Environmental Assessment completed for the land exchange. A summary of the information collected in that evaluation is available for review in the Botanical Report prepared for that EA.*

*Additionally, in July and August of 1996, TLMD Staff conducted field evaluations on each of the tracts acquired in the land exchange. The multi-purpose inspections were conducted to determine the current state of the various vegetative communities and riparian zones, establish carrying capacities for each of the tracts, locate existing fences and other improvements, locate sources for stockwater, and to identify resource concerns to include infestations of noxious weeds. These surveys provide the information from which the leases are being based. Data from these surveys was not formally compiled and summarized. However, the individual evaluation forms are retained by TLMD on a permanent basis and are open to public review.*

*Generally, the information contained in the evaluation documents indicates that the vegetative communities occupying specific range sites are in poor (17% of climax) to excellent condition (100% of climax) as determined using the ecological site method of range analysis. This is a rather broad range. However, the evaluations indicate that the preponderance of the range sites are in a mid-range of 50% to 80% of climax, corresponding to low-good to low-excellent range condition.*

*As noted in the Draft EA, a host of factors have some degree of influence over the plant community that currently occupies a specific site. Native plant communities are an expression of a dynamic and very complex and interactive system. In part, the list of factors affecting the existing community includes the following: the timing, frequency, and intensity of grazing; the duration of rest periods between grazing events; the type and frequency of disturbances such as fire; soil texture, depth and temperature; physical and chemical characteristics of the soil; amount and type of plant residues on the soil surface; nutrient availability; soil moisture conditions; the timing, intensity, and form of precipitation; the length of day, and ambient air temperatures, the presence of non-native plants or invasive plants; the vigor and relative productivity of the plants; the type and number of herbivores that grazed the site in the recent past and over time; the slope and aspect of the site; the juxtaposition of the site in relation to other sites, and the make-up of the other sites with which the subject site is associated; the position of the site on the landscape; and the availability and distance to water. Altering or changing any one or a combination of these factors may or may not have noticeable effects on the community that is being expressed on a site, depending on the degree of change and the particular sensitivities of the subject site. Shifts in a particular plant community are generally not linear.*





*Without a full accounting and in depth analysis of these factors for each or any of the sites of the affected properties, only broad statements or generalizations will be made regarding past causes and effects for apparent shifts in the plant communities of the subject properties in the EA for the Special Leases.*

### **3. Rental Issues**

It was noted that the text of the Draft EA suggests that the rentals for Units 2, 3, and 5 are fixed, but rentals for Units 1 and 4 may be subject to change, if adjustments are made in the carrying capacity in AUMs set for the respective units.

#### **TLMD's Response**

*Livestock grazing (cattle and or bison) on the premises of each of the lease units on a lease-year basis (March 1 to February 28) is limited to the carrying capacity in AUMs set by the Department. Under the leases being considered for issuance, the prospective lessees would be entitled to allow their cattle or bison as the case may be, to graze no more than the AUMs specified for the respective unit. Exceeding the rated carrying capacity without prior authorization from TLMD would be contrary to the lease agreement and could result in cancellation of the respective lease(s). Though the bidding on the offered leases was conducted on a per acre rather than a per AUM basis, the established carrying capacity for each of the units was clearly stated in the bid packets. From the perspective of TLMD, the bids submitted by the prospective lessees for the grazing component of each of the leases were based on the rated AUMs, and no more.*

*Though it was somewhat vaguely stated in information of the competitive bid packets, the TLMD reserves the right to adjust the carrying capacity on any or all units at any time during the 20-year term of the leases on an as-needed basis to reflect forage availability and to ensure protection of the resource. The likelihood for any substantive adjustments in the rated AUMs for Units 2, 3, and 5 is slight. Units 1 and 4 on the other hand are different. These two units have acreage that has historically been irrigated, with potential for redevelopment of the same. Redevelopment in the irrigated acreage could result in substantial increases in available AUMs, particularly on Unit 1. In order to get authorization to remove additional AUMs however; the lessee would need to get express written approval from TLMD. This would require negotiation between TLMD and the lessee or sublessee of the affected unit for reasonable compensation to the associated Trust for the value of the additional AUMs.*

### **4. Disease Issues**

The Montana Wildlife Federation considered potential transmission of Johne's disease to local wildlife populations as a major concern, noting that no planned testing for the disease in bison transferred to the Snowcrest leases, and citing a general lack of information on Johne's disease in wildlife.

It is noted by TEI, that from a disease perspective, the bison that would be grazing Units 1, 3, and 4, likely pose less of a hazard to transmitting disease on to local wildlife populations, than would the cattle grazing on Units 2, and 5. As reasons, TEI offers the following three arguments 1) TEI's Bison herd has been closed since 1993 (meaning that no new animals have been brought into the herd since 1993); 2) cattle and bison are equally susceptible to the same diseases; and 3) TEI's bison herd is subject to more extensive testing (and culling) than are local cattle herds.

#### **TLMD's Response**

*The Flying D herd is the source of all bison used for stocking the subject properties. TEI voluntarily subjects that herd to an aggressive and costly testing program for Johne's and other contagious diseases. By means of that testing, cases of Johne's disease have been documented in the herd. All animals testing positive for it are culled.*

*Additionally, despite laboratory testing of samples taken from more than 100 elk harvested from the area of the Flying D, not a single case of Johne's disease has been documented. It is suggested that the negative results from the tested elk indicate that the chance of transmission of Johne's from afflicted bison to free roaming elk is*



slight at most. In the publication *Brucellosis in the Greater Yellowstone Area*, the authors note that "the risk of transmission of Paratuberculosis (Johne's Disease) in bison and elk appears to be low, although it does occur." If transmission of the disease from afflicted bison to elk was problematic, it would likely be showing up in the elk habitating the Flying D. The test results from these animals simply do not indicate that transmission to elk is problematic.

As was noted in the Draft EA, Johne's disease afflicts cattle as well, and because contaminated manure is the primary vector for the disease, it appears to be most problematic in operations where herds are held in relatively close confinement.

The presence of Johne's disease in the bison herd of the Flying D is documented solely because the disease has been specifically tested for, and because TEI has been open with this information. As was noted in the Draft EA, Johne's disease also commonly afflicts domestic cattle. Because of the cost of testing and other factors, testing for Johne's disease is not routinely done on domestic cattle herds. However, based on testing of slaughter animals, it has been estimated by some in the practice of veterinary medicine, that anywhere from 2 to 20 percent of all domestic cattle on a nationwide basis are afflicted with the disease. No statistics on the disease are available for Montana, because it is not commonly tested for in typical livestock operations in the state. However, it is thought to be widespread in cattle herds here as well.

## 5. Recreation Issues

TEI offers that from their viewpoint, "bison are no more dangerous to recreationists than moose or ill-tempered cattle."

### **TLMD's Response**

Though it may be true that bison are no more dangerous than moose, the moose that inhabit the area of the Snowcrest properties are wild and free-ranging animals. The TLMD has no intent or desire to attempt to control these wild animals, and any recreationist crossing paths with a moose will have to take their chances with an encounter. Conversely, bison that would be on the properties are not wild and free ranging animals. They are semi-domesticated, and would be permitted there only under express authorization from the TLMD. Because they are somewhat of a novelty, particularly compared to domestic cattle (regardless of their temperament), bison can and do attract potential trouble or contact. The numerous accounts of encounters between tourists and these animals in Yellowstone Park verify that fact. It is the combination of their unpredictable temperament and novelty that makes bison more dangerous to potential recreationists than domestic cattle.

## 6. Taxation

Clarification was provided by TEI on the taxable values of cattle and bison. The information they provided indicates that for 1998, the taxable value of a breeding age domestic cow was \$316, as opposed to \$428 for a cow bison of the same status.

### **TLMD's Response**

Presuming that an equal number of bison as opposed to domestic cattle could graze the properties, and presuming all animals would be considered resident in Madison County for tax assessment purposes, indicates that bison cows would generate approximately 35 percent more personal property tax payable to Madison County than would the same number of domestic cows of the same age class and status.



## **7. Potential Impacts To Fisheries**

It was noted that the Draft EA did not discuss the potential effects of issuing the leases on the fishery resource, particularly the WestSlope cutthroat trout population of Robb Creek.

### ***TLMD's Response***

*The properties have a long history of grazing by domestic livestock of various classes and species at undocumented levels. Permitted grazing by domestic livestock under the special leases will be restricted to conservative levels as are deemed appropriate by TLMD. This controlled grazing should allow the riparian resources to heal over time, resulting in a corresponding improvement in the associated fisheries. Over time, TLMD anticipates that improvements should be observable in both Ledford and Robb Creeks.*

## **8. Effects Of The Westslope Cutthroat Trout Conservation Agreement And Management Plan**

It was suggested that the Special Lease EA should offer some insight on management actions that could potentially be required under the draft Westslope Cutthroat Trout Conservation Agreement And Management Plan.

### ***TLMD's Response***

*So noted. At this time the Westslope Cutthroat Trout Conservation Agreement And Management Plan is in the draft stage. It addresses management implications in very broad terms only. Management actions that might follow implementation of the agreement would include development of localized management plans addressing specific issues or concerns. In addition to other potential actions, these local plans might in-turn consider altering seasons, intensity, and duration of grazing in specific areas, changing livestock classes, fencing, changing locations where salt and mineral supplements are offered to livestock, and development of off-stream water sources. All of these factors have some effect on the patterns of grazing use across the landscape. However, because of the detail that is lacking in the draft Westslope Cutthroat Trout Conservation Agreement And Management Plan, specifics on resulting management implications for the affected leases cannot be provided in the EA being prepared for the Special Leases.*

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